

Arranging For EH&FA Financing In Knoxville

(Concluded from Page 1, Column 5) Valley Authority in connection with the new financing plan, and is now seeking to close a similar contract with the city of Knoxville.

All electric properties of the Tennessee Public Service, former electric utility in Knoxville, have been transferred to the TVA and the city of Knoxville, and the EH&FA is dealing with the latter to effect its plan, Gordon P. Street, EH&FA field representative, declared.

The city probably will agree to cooperate, Mayor Walter Mynatt stated, since by doing so it will help to promote the sale of appliances and thereby increase its power load.

The contract between the TVA and the EH&FA was to become effective when the former officially took over the Tennessee Public Service facilities.

In addition to Knoxville, the financing scheme will operate in Rogersville, Newport, Jefferson City, Rutledge, and Maynardville, and in the connecting rural areas.

The EH&FA will buy conditional sales contracts from electrical appliance dealers, and the customer will be billed each month along with the regular electricity bill.

The EH&FA will pay the utility \$1 for placing the account on its books, with an additional 12½ cents a month to cover the cost of book-keeping and billing.

To illustrate the procedure under the new financing plan, the following illustration is given:

A customer buys a refrigerator for \$175 from a regular dealer, and pays \$20 down. The balance of \$155 could be financed over a period of two years, making monthly payments, including interest, of approximately \$7.10.

Instead of paying the dealer this monthly amount, the customer receives his bill for electricity, sees that his monthly refrigerator payment is listed on it, and pays the entire bill at the utility branch.

Mr. Street stated that savings in power bills under the low TVA rates would more than make up for the interest charge on the appliance.

Credit periods will, in some cases, be extended for as long as four years, it was pointed out. These cases include the purchase of any two of the following appliances: refrigerator, stove, water heater, water pump, milk cooler, farm motor, clothes ironer, or cream separator.

Also included in the four-year allowance are the purchases of either a washing machine or a vacuum cleaner in conjunction with any two of the appliances already listed.

Only the very low-priced electrical appliances are excluded from the EH&FA financing scheme.

The EH&FA also is trying to get the city of Knoxville to agree to the financing of house rewiring jobs costing \$40 or more.

Because of the expected appliance sales upswing, the EH&FA may establish a Chattanooga office.

Chicago Utility To Be Agent For EH & FA

CHICAGO—Under a contract recently signed with Electrical Home & Farm Authority, Commonwealth Edison Co., local utility, will act as agent in a government financing plan covering purchases of refrigerators, washers, and other electrical appliances.

It is expected that between 150 and 200 Chicago appliance dealers soon will apply to be incorporated in the financing set-up established by the EH&FA - Commonwealth agreement, which went into effect last week.

The contract follows a series of meetings in which representatives of the Illinois Radio & Electrical Dealers Association and several individual companies also participated.

Under the plan, a sales contract is assigned by the dealer to Commonwealth Edison, acting as the EH&FA agent. It is a full recourse plan, and provides for a flat rate of 5%.

Commonwealth Edison will make collections on sales by adding the amount to the monthly electrical bills of its customers as a "painless" method of payment.

Distributor In Toledo Explains Revolt Against Federal Activities

(Concluded from Page 1, Column 5) Insurance, Old Age Pension, Social Security, and the Ohio Sales Tax of 3%. When this is all added up it amounts to a substantial proportion of our business.

"People here are getting so fed up on Roosevelt and the imposition of 'codes' and regulations from above that the Merchants and Manufacturers Association here in Toledo is opposing the passage of our new Plumbing Code.

"Yes," Mr. Larsen said, "we have a plumbing code now. The new code contains a few minor changes that will improve the operation of the trade in Toledo. But the very fact that this document is a 'code' and becomes a part of the government regulations has brought about strong opposition from the Merchants and Manufacturers Association on the ground that all codes, no matter how desirable, should be opposed. The new code calls for the examination of all journeymen, which is similar to the rule in 80 other cities at the present time, but it looks now as if it will not go through."

The Larsen company handles Chrysler summer and winter air-conditioning equipment in addition to its regular heating business, which has been in operation for the past 35 years. No sheet metal work is done by the company. Sub-contracts are let to several Toledo shops.

Three salesmen are employed by the air-conditioning department, which also requires the services of two full-time engineers. No layout is made for an architect or general contractor on any job until the contract is signed.

"Making layouts is an economic waste," Mr. Larsen stated. "It costs about \$20 to make any kind of a drawing, and if six contracts are bidding, which is not unusual, the total cost of layouts on a small job would be \$120. This is out of proportion to the profits available in the contract."

"We do not take air-conditioning work unless we get our regular margin of profit. We have let the cheap work go by, and in that way have been able to make a go of the business. We realize that the mortality in the industry has been terrific, and in certain cases this is the fault of the manufacturer. On the other hand, the air-conditioning dealer can make a real success of his business if he does each job at a profit."

Inspect Electric Kitchen—Win a Prize, Is Offer

CHICAGO—Chicagoans will have an opportunity to vie for 100 prizes with a total retail value of \$2,500 in a contest inaugurated Sept. 12 by Commonwealth Edison Co. to help familiarize the public with the many advantages of the all-electric kitchen.

Contestants are asked to inspect the five new model electric kitchens in downtown Commonwealth Edison electric shops, select the one they like best, and then complete the following statement in 50 words or less: "I would enjoy having in my home the all-electric kitchen checked above because. . ."

Entries must be brought to the main electric shops before 5 p.m. on Oct. 29, or placed in the mail by midnight on that date. Prizes include electric ranges, refrigerators, water heaters, several other electrical appliances, and merchandise certificates.

The all-electric kitchen competition is open to all residents of Chicago except employees of Commonwealth Edison, its subsidiaries and advertising agency, and members of their families. A separate plan of a similar nature also is being planned for Edison employees.

500 G-E Erie Plant Workers Recalled To Jobs

ERIE, Pa.—To meet increased production requirements in the refrigerator department, approximately 500 Erie General Electric Works employees, laid off during the last year, have been recalled to work.

Chicago Tonnage Gains During August

(Concluded from Page 1, Column 2) ported for 23 central-station installations during the same month last year. Contracts were closed this August for 22 conditioning plants.

In addition to these central-station jobs, 58 room coolers also were sold by Chicago dealers during August, as compared with 32 during the same month a year ago.

Last month's central-station air-conditioning contracts were divided as follows:

Restaurants	7
General Offices	4
Clothing Stores	2
Drug Stores	1
Food Stores	1
Candy Stores	1
Shoe Stores	1
Miscellaneous Stores	1
Funeral Homes	1
Industrial Plants	1
Hotels	1
Theaters	1

Total

Herrlich Moved To N. Y. Branch of Kelvinator

(Concluded from Page 1, Column 4) will be connected with the Kelvinator automatic heating division, and will work under Jack Reeves, in charge of the southeastern division for Kelvinator.

Mr. Herrlich has had long experience in the wholesale appliance field, having been with Southern Wholesalers, Inc.

O'Harra, Densmore Back At Old Norge Jobs

(Concluded from Page 1, Column 5) Mr. Densmore will handle everything west of the Windy City. Present plans call for both of them to make their headquarters in Detroit.

"Glenn" and "Denny," as the industry knows them, were the men who did most of the field work in the days when Norge was pushing its way forward to a position among the leaders in the household electric refrigeration industry. It was they who laid out the original distributor territory lines for the company.

Mr. Densmore is a real veteran of the industry, having been with Kelvinator for a number of years before joining the Norge organization in 1929. In the past year or so he has been active in directing the activities of the Norge field organization.

Mr. O'Harra came to Norge in 1930 from the United States Rubber Co., where he had been general sales manager of the G. & T. Tire Co. He established the Norge Corp. of N. Y. (as a factory branch), and was range sales manager.

McMann Reports Radio Orders Triple Last Year

NEW YORK CITY—Orders for 1939 Westinghouse radios received by R. H. McMann Co., distributor, at its recent three-day dealer showing were three times the number ordered during last year's show.

6,469 Appliances Sold In 8 Months In Va. Area

ALEXANDRIA, Va.—Dealer sales in the territory of Virginia Public Service Co. during the first eight months of this year totaled 6,469 units, according to statistics compiled by the company. This compares with dealer and utility sales of 8,132 appliances in the same period of 1937.

Water heaters were the only appliance to show a gain this year over comparable 1937 figures, sales for the eight months totaling 268 units, as compared with 265 last year.

Refrigerator sales this year total 5,513 units, against 7,041 in the same months last year; and electric range sales numbered 688 units, compared with 826 in the first eight months of 1937.

For August only, refrigerator sales totaled 670 units, with washers second with 304 sales reported. Electric range sales during the month totaled 61 units, with 25 commercial refrigeration jobs, 21 ironers, 18 water heaters, and one milk cooler completing the month's total.

Northern division of the company led in sales with 316 units valued at \$42,653. Included in this total were 228 household refrigerators, 79 washers, 28 electric ranges, 16 ironers, and eight water heaters. Eastern division had 219 units, with 150 refrigerators, and 60 washers.

Total number of major appliances sold in all six company divisions in August was 1,100, with a dollar volume estimated at \$150,872.

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DEPENDABLE

THE BYWORD FOR A-P VALVES

Air Conditioning & Refrigeration News

The Newspaper of the Industry

Trade Mark Registered U. S. Patent Office. Established 1926 as Electric Refrigeration News
Member Audit Bureau of Circulations. Member Associated Business Papers.

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THE COLD CANVASS

By B. T. Umore

Records Sought

Dun & Bradstreet, the credit agency, would like to hear from any company which has kept a record of all the reports which they have been required, or requested, to furnish about their business to national, state, county, and local governments and private agencies. This would include tax reports, employment reports, inventory estimates, questionnaires, etc.

The information is desired for the Central Statistical Board which has been appointed by President Roosevelt to investigate this growing burden on industry and business.

Here's an opportunity for methodical individuals, who have the habit of keeping a record of everything, to come to the aid of their country.

Mr. Berle's Report

Quoting Walter Winchell: "A. A. Berle, who went back to Washington to help the New Dealers (at their request), resigned suddenly. The reason is the now famous Berle Memorandum."

When old B.T.U. read the report (published in the NEWS) he could hardly believe that it represented the thinking of a New Dealer in good standing. Mr. Berle seems to know and understand business methods and motives. He proposes that the committee get the facts about monopoly before deciding what to do about it. No wonder he is in bad with Washington.

Off the Record

The 1938 Dewey denies having said, "You may backfire when you are ready, Pecora."

Prosperity should be returning since the government has decided to take the "Indian sign" off the nickel, opines Lee Clark of Frigidaire.

If the widespread drive against the Policy Racket continues, the nation may return to the good old days when Central could say, "Number, please" without getting today's winner.

Now that the vacation season is over, we won't have to stand around and admire all those gosh-awful photographs that most vacationers always bring back.

With hoop skirts and corsets coming back in style, that peculiar looking thing on the dashboard of 1939 automobiles will no doubt be the whip socket.

Carrier Stockholders Okay Debenture Plan

SYRACUSE, N. Y.—Stockholders of Carrier Corp., at a special meeting Sept. 12, voted approval of a recapitalization and refinancing program, principal proposals of which provided for issuance of \$2,500,000 in 10-year convertible debentures, and for a change in authorized capital from 500,000 no par value shares to 700,000 shares with a par value of \$1.

Proceeds of the debenture will be used to pay off the present bank loans of \$1,500,000 and to provide additional working capital for the corporation.

It is planned to offer the debentures to the public during the fall of 1938, and to make them convertible into common stock of the corporation at prices more favorable than that at which the common stock is selling at the time of the public offering.

July Sales of 9,061 Stokers Is New Record

Exceeds July, '37 Sales By 20%; Anthracite Models In Boom

WASHINGTON, D. C.—Stoker sales of 9,061 units during July of this year established an all-time sales record for the month, exceeding the previous July record established in 1937 by approximately 20%.

Sales figures are based on the reports of 112 manufacturers to the Bureau of the Census, Department of Commerce, and represent a total of all five classes of domestic and commercial stokers.

Anthracite stokers reported under Class 1, which includes most residential models, show a greater increase than any other classification. July sales of 1,319 anthracite units, as compared with 476 units sold in July, 1937, represent a gain of nearly three times the 1937 volume.

Efforts of Anthracite Industries in promoting the sale of anthracite stokers and the use of hard coal appear to be having a pronounced influence on the total volume of stokers sold by the industry.

Detroit Tables Efforts To Get Enforcement Of 'Operators' Law

DETROIT—Demands of Robert W. Passage, head of the Boiler Operators Union, affiliate of the American Federation of Labor, for stricter enforcement of the city ordinance requiring licensed operators on boilers and refrigeration systems, were tabled and referred to the department of safety engineering by the Detroit Common Council at a public hearing held Sept. 14.

In a petition filed with the Council, Mr. Passage charged that licenses for the operation of boilers and refrigeration systems have been issued to "incompetent persons," and asked for stricter enforcement of the ordinance requiring skilled operators.

N. Y. Fair's Conditioning To Double Chicago's

WASHINGTON, D. C.—That the New York World's Fair will constitute a dramatic demonstration of air conditioning for the World of Tomorrow is indicated by the announcement from W. B. Henderson, executive vice president of the Air Conditioning Manufacturers' Association, that exhibitors have already made plans for twice as much air conditioning as A Century of Progress Exposition had in Chicago four years ago.

"The Chicago exposition, with approximately 750 tons of refrigeration (Concluded on Page 16, Column 3)

Asthma Victim, 8, Finds Relief In Cooled Hotel

KANSAS CITY, Mo.—Like an oasis to a throat-parched desert nomad is an air-conditioned hotel room here to 8-year-old Omar Ray Watson, asthma victim.

In his home in Weston, Mo. one night recently, Omar Ray suddenly was seized with a severe attack of asthma. He could hardly breathe, and his father, Arthur G. Watson, thought he might be suffocating.

Mr. Watson bundled the boy into (Concluded on Page 16, Column 3)

Williams Will Head Merchandising Div. Of Westinghouse



FRANK B. WILLIAMS

MANSFIELD, Ohio—Frank B. Williams, Jr. has been elected vice president in charge of the merchandising division of the Westinghouse Electric & Mfg. Co., and assumes charge of the division immediately, making his headquarters here.

Mr. Williams succeeds A. E. Allen who has resigned.

The Westinghouse merchandising division conducts the business of the company in refrigeration, air conditioning, ranges, heating appliances, fans, and other allied household and office electrical products. Manufacturing plants of the division are located here and in Springfield, Mass.

In joining Westinghouse, Mr. Williams leaves the position of vice president and sales manager of the Diehl Mfg. Co., the electrical division of the Singer Mfg. Co., at Elizabethport, N. J.

Mr. Williams started his industrial career on the test floor of the Diehl Mfg. Co. a few weeks after receiving his degree in electrical engineering from Drexel Institute. By 1915 he had become production manager of the company.

In 1918 he joined the sales department of the Western Electric Co. Two years later he was made manager of the power apparatus sales division of its New York district. He later continued in this position with the Graybar Electric Co. when that company was formed.

In 1927 he returned, as sales manager, to the Diehl company of which he has been a vice president since 1930.

Air Conditioning Will Keep Firefighters and Fire Hose of Reno, Nev. In Tip-Top Shape

RENO, Nev. — Firefighters of Reno's central firehouse no longer have to worry about uncomfortable conditions in their station quarters as well as on the job, for a \$5,000 year-around Carrier air-conditioning system has been installed in the station by Savage & Sons, local plumbing, heating, and air-conditioning contractor.

When the fire department was first approached on the matter of air conditioning, department heads approved of the general idea but could not decide whether cooling alone should be supplied, or whether the system should be of the year-around type. The latter type of installation finally was decided upon.

A number of peculiar conditions had to be reckoned with in conditioning the building. First problem was to provide ideal sleeping and living conditions in the second-story dormitory where the men spend most of their time while in the station.

During summer months the cool air supplied to the living quarters naturally would leak down into the

Survey of 1,500 Detroit Sales Shows Clearance of '37 Units; Trade-Ins No Major Problem

Stockholders' Meeting Lends Credence To Crosley Car Rumor

CINCINNATI—Persistent rumors that Crosley Radio Corp. had plans on foot to enter the low-cost automobile field gained credence Sunday when the company called a special meeting of stockholders for Sept. 23 (Friday) to vote on a proposed amendment of incorporation articles to permit possible entry of the company into that field.

Letters sent to shareholders said the purpose of the amendment was to "broaden the activities in which the company is authorized to engage, so that the company will be able, if conditions warrant, to enter the automobile industry, when such entry appears desirable."

The amendment also proposes to (Concluded on Page 3, Column 3)

Mystery Shrouds Death Of Veteran Salesman Found In River

DETROIT, Sept. 19—The body of Milton A. O'Day, 35-year-old electric refrigeration salesman who had been active in the industry (largely in the employ of the Kelvinator organization) since 1926 or before, was found near here early yesterday afternoon floating face down in the Rouge river.

Mr. O'Day, who at the time of his death was employed as a commercial refrigeration salesman and collector by Gratiot Fixture & Supply Co., entered the refrigeration industry as a service man with the old Nizer organization. He first became associated with Kelvinator, still in a service capacity, in 1926 when Kelvinator absorbed the Nizer company.

In 1928 he went to Dalrymple-Kelvinator Co., Kelvinator distributor here, as commercial refrigeration salesman, later becoming manager of the company's commercial refrigeration activities. Just a year later he became associated with Kelvinator's Detroit factory branch as manager of building sales.

(Concluded on Page 16, Column 4)

5 & 6 Cu. ft. Models Most Popular; One-Third of Buyers In Auto Jobs

By T. T. Quinn

DETROIT—That the mechanical refrigerator trade-in problem may turn out to be anything but the "bugaboo" it has been pictured is indicated by replies to a questionnaire sent out by the Detroit office of This Week magazine in connection with an analysis of 1,500 electric refrigerator sales made this year by three large Detroit appliance outlets.

The study is the work of Ray Haun, manager of the local office of the weekly magazine, which is distributed with the Sunday editions of newspapers in 24 metropolitan areas.

Analyzed were the first 500 electric refrigerator sales made this year by each of three Detroit large-scale outlets—J. L. Hudson Co., Good Housekeeping Shop, and People's Outfitting Co.

Hudson's and People's Outfitting are department stores, and Good Housekeeping Shop is a large appliance retailer, with seven stores scattered throughout the city.

In addition to indicating that for every buyer who trades in his used refrigerator on the purchase of a new one, another used-model owner either keeps his old refrigerator, sells it himself, or gives it away, the study brought out the following pertinent facts:

1,334 of the 1,500 sales surveyed involved a 1937 model refrigerator; only 166 models of 1938 manufacture were sold.

1,260 sales were either 5 or 6-cu. ft. capacity models; 666 of these for 6-cu. ft. models alone.

565 of the 1,500 sales were made to factory or automobile trades workers, despite the admitted slump in factory employment here this year.

464, or nearly one third of the buyers studied, owned their own homes.

Hudson's, generally conceded to attract the higher-income type of (Concluded on Page 4, Column 1)

'Ghost' Department Set Up For Trade-Ins

NEWARK, N. J.—A refrigerator trade-in policy involving a nebulous "department," originally adopted as an experiment, has been made an integral part of the major appliance division of Kresge's department store here, I. A. Denburg, home furnishings merchandise manager, has announced.

To record the history of a traded-in used product from the time of its acceptance to its final disposal, a separate department has been set up in the store's books.

Under this arrangement, the (Concluded on Page 12, Column 4)

Bridgeport Brass Builds \$4,500,000 Rolling Mill

BRIDGEPORT, Conn.—In what is said to be the largest expansion and modernization program undertaken in the non-ferrous metals industry since 1929, Bridgeport Brass Co. announced the completion this month of a new rolling mill at Bridgeport, Conn. for the production of brass, copper, and copper-base alloys for industrial and commercial use.

Built at a cost of more than (Concluded on Page 16, Column 2)

Specialty Selling Methods

'Lectric Lena' Personifies Benefits of an Electrical Living To Rhode Islanders

PROVIDENCE, R. I.—"Lectric Lena" is a cheerful person who does many things well. She's versatile, neat, economical, and energetic—and since April, 1936 has been "the perfect household helper" to customers of Narragansett Electric Co. here.

Brainchild of two Providence men who conceived the idea of a small life-like character, clothed in Colonial costume, as a symbol of electricity in the home, "Lectric Lena" has but one purpose in life—to make life easier for all housewives.

According to John C. Revens, advertising man at Providence, Lena has been described as a clever young woman, cheerful, clean, neat, economical, and energetic. She is pictured as a hard worker, thoroughly reliable, trustworthy with children. She modestly admits to being a wonderful cook, and an excellent laundress. In short, she is the perfect household servant.

REAL SALES HELP

Lena has been sold to the general public as an advertising character, symbolic of Narragansett Electric Co. and its services. As such, she is the central character about which the utility builds its advertising campaigns. Through Lena, electric refrigeration and electric cookery are fast becoming recognized necessities in the modern home.

During the past two years, Lectric Lena has been appearing in many different and varied media. Newspapers have come in for most Lena advertising, but billboards, radio, car cards, decalcomanias, window, and even real life advertisements have been used.

The newspaper campaign has extended to three local papers on a weekly basis.

'SITUATION WANTED—FEMALE'

Advertisements describing Lena and her work first appeared in April, 1936, under the heading "Situation Wanted—Female."

"GENERAL HOUSEWORK wanted by clever young woman," the advertisement read. "Cheerful, clean, neat, economical, energetic, hard worker, thoroughly reliable, trustworthy with children, wonderful cook; excellent laundress, willing to do all cleaning, willing to work all hours; no day off, do not object to entertaining, very capable, small wages, best of references. Lectric Lena."

The advertisements bore no advertiser's signature or name. Later advertisements had Lectric Lena receiving offers of a job from hundreds of housewives, who sought "the perfect servant" for their general maid. How Lena promised to work for all these ladies and cut their housework in half made a story that was interesting reading.

Billboard advertising has been used to complement the newspaper



Electric REFRIGERATION
Electric COOKING

Each is a marvel of efficiency in its own work, keeping food—cooking food better than it was ever kept and cooked before. And TOGETHER—each becomes even more economical than alone! For electricity (unlike as many other things) costs less as you use more.



STEP BY STEP—MAKE YOUR HOME ALL-ELECTRIC

One of the newspaper advertisements which has made 'Lectric Lena' a symbol of the 'perfect household helper' to customers of the Narragansett Electric Co.

advertisements, and has made interesting reading. Chief item of interest in these displays has been a large, moving rocker in which Lena gracefully swings back and forth. Calendars reproducing this display made their appearance early this year, and were in such demand that the supply soon was exhausted.

Children especially were intrigued by the calendar, and sought the small Lena for their doll collections.

Radio advertising, in the form of an amateur hour, featured Lectric Lena, the housewives' friend, as guest star. Car cards, window displays, and decalcomania designs, all bearing a likeness of Lena, have contributed to her growth and popularity.

SHE COMES TO LIFE

Crowning feature in the story of Lectric Lena, to Mr. Revens' mind, however, is her adaptation to real life as portrayed by Mary Lou Gourlie, comely home lighting adviser of Narragansett Electric Co.

Miss Gourlie, attired in a hoop skirt and stiff white apron, with her hair tied in a psyche knot, daily greets customers on the floor of the Electric Shop. In her role as Electric Shop hostess, she makes many new friends for electric refrigeration and electric cookery, says Mr. Revens.

'LENA' HAS PROBLEMS

The real-life Lena has had many varied experiences with her new friends, the advertising man reports. One man mistook her for a statue a few weeks ago, and tried to light a match on her back. An unknown man continuously sends her fan mail, and innumerable housewives

ask her advice on cooking problems.

All in all, Lena represents a smart promotional idea, and justifies the faith which Vice President William Webster and Sales manager A. Wilson Barstow place in her ability to win friends for electric cooking and refrigeration.

Since her creation, Lena time and again has proved her worth as a merchandising plan par excellence, says Mr. Revens. Her cost in dollars and cents is minute, compared both with the goodwill and the merchandise sales she helps create, he said.

Meat Markets Join In 8-Day Westinghouse 'Meat-Keeper' Drive

TOLEDO—Thirty sales and 225 close-to-closing prospects resulted from a recent eight-day drive by Westinghouse refrigerator dealers in cooperation with retail meat merchants in and around Toledo.

Centering their whole campaign on the Westinghouse "Meat-Keeper," the Toledo dealers enlisted 101 meat markets, assigning about 10 to each dealer.

Every meat market displayed on its floor a Westinghouse refrigerator and one or more of the "butcher" refrigerator displays, showing a butcher at his cutting block saying, "I sell it fresh, and this Westinghouse kitchen-proved refrigerator keeps it fresh!" On the side of the cutting block pictured in the cardboard display was an invitation to see the Westinghouse refrigerator at a certain dealer's store.

Each market featured a special on veal, and displayed the veal in a Meat-Keeper. Folders were distributed in the meat markets inviting housewives to get a free copy of "Home Hints on Meat," Westinghouse booklet, at the dealer's.

Both butchers and dealers advertised the principal factors in the campaign. Dealers offered butchers cash rewards for prospect names closed within 30 days, and held four Meat-Keeper meetings, three of which were for the particular benefit of the retail meat merchants.

As a result of the drive, dealers profited on refrigerator sales and prospects, and the butchers doubled, and in many cases tripled, their normal veal sales.

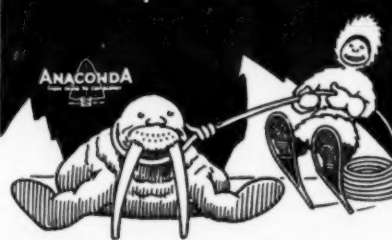
Grand Rapids Salesmen Report Direct Results From Own 'Crusade'

GRAND RAPIDS, Mich.—Direct results from the National Salesmen's Crusade here were reported by salesmen of Consumers Power Co. following the opening day of the local campaign.

Reports to utility executives at the end of the day showed 17 major appliance sales, including seven household refrigerators, four commercial refrigerators, two electric water heaters, two washers, one ironer, and one vacuum cleaner.

Salesmen attributed several sales directly to "Sales Men Jobs" activities. One prospect watched the downtown parade in the morning, then promptly signed an order. Another wanted to rent a water cooler, but noting the salesman's button decided to buy one instead. One salesman sold a washer to a prospect upon whom he called just as she was reading an account of the crusade in the paper.

Anaconda Copper Refrigeration Tubes Dependable!



THE AMERICAN BRASS CO.
FRENCH SMALL TUBE BRANCH
General Offices, Woburn, Mass.

Small-Town Dealer Who Pioneered Time Payments Draws Buyers From Cities

GRASS LAKE, Mich.—From the horse and buggies of the nineteenth century to the streamlined automobiles of today, people in farm communities have traveled to the city to buy, barter, and shop for all kinds of merchandise. Even the expression "goin' to town" has been indicative of the trend.

During this 50-year period the E. J. Foster Co. of Grass Lake has been reversing this process with business policies which bring the city customer to this small Michigan village to trade.

Founded in 1887 by E. J. Foster, who died last year, the business has grown from a small furniture store to its present size. The company is now operated by C. E. Foster, son of the founder, and the Maytag washer department is larger than the usual appliance store.

A branch store, located in the nearby city of Jackson, handles Leonard refrigerators, Maytag washers, electric and gas ranges, and other appliances. The Jackson store is managed by A. G. Van Syoc.

THIRD & FOURTH GENERATION

Sales are now being made by the Foster Co. to the third and fourth generations of the families who were the first customers of the store. People come from Detroit, Jackson, Ann Arbor, and many other cities and towns in southern Michigan to do business in Grass Lake. Mr. Foster believes that the tendency of people to come long distances to trade may be traced to the fair and equitable policies carried out by his father over a long period of years. People who knew E. J. Foster like

to remember that he was always on hand in the store, for even during recent years, when he might have taken a well deserved rest, he was still doing business at the old stand. His work was his hobby, and he made friends with his customers, even unto the third and fourth generation.

EARLY INSTALMENT SELLING

Mr. Foster, who was a banker as well as a successful merchant, started long before the days of finance companies to apply instalment credit to the sale of furniture and household appliances. His reasoning said that if people had to borrow money at the bank to make major purchases for their homes, why not lend them the money to buy appliances, and have them pay it back out of income.

The Foster Co. still carries all customer paper, and none is sold to banks or finance companies.

According to Mr. Foster, his father "knew everyone personally," and was thus able to use exceptional tolerance in the handling of customer's accounts. The same policy exists today, and if the customer is sick or out of work, the store has no set plan of repossessing merchandise, but always attempts to work the matter out on a basis which the customer can handle.

Down payments are usually arranged "to suit the customer," Mr. Foster said.

While customers come long distances to trade at the Grass Lake store, "outside selling" methods are still employed in the Jackson appliance store.

Toledo Women Flock To Educational Meetings Held In Utility's 'Electric Institute'; No Sales Attempted

TOLEDO—Intended purely for the purpose of educating Toledo housewives to the advantages of modern electrical living, the Toledo Edison Co.'s "Electric Institute" in the basement of its headquarters here has proved to be a favorite meeting place for clubs and other social organizations, where women gather socially and to be subtly educated on new developments in lighting and electrical appliances.

Probably the most unusual thing about the Toledo Edison "Electric Institute" is the homey atmosphere it creates. It is compact and comfortable, in contrast to the barnlike auditoriums in which demonstrations are often made, and floors are comfortable, which not only helps to further the homelike atmosphere, but which also reduces the noise and clatter.

At the front of the room is a slightly raised platform, from which the talks and demonstrations are given. Off at one side is a sort of a cove, which would correspond to a den in a private home, in which up-to-date types of home lighting are demonstrated. (The modern lighting schemes, however, are in

evidence throughout the institute.)

At the rear is a model kitchen, complete with all the major appliances. Air conditioning provides a comfortable atmosphere at all times.

Popularity of the place is demonstrated by the fact that it is booked solidly through to Christmas, and the various clubs, religious and social organizations are allowed but one visit a year.

Three women are employed by the Toledo Edison to act as lecturers and demonstrators at these affairs. Two of them are home lighting experts, and the third is a home economist.

Experience has shown that illustrated lectures are most effective in telling the story, so slide films are used on all occasions. Once in a while the home economist does actual demonstrations in the kitchen, which the women inspect at their leisure.

No names are taken, no follow-up is made of those attending. But the utility company feels that it is realizing many tangible returns from its efforts to teach Toledo women about the advantages of "living electrically."

Electrolux Features Govt. Sales In Bulletin

EVANSVILLE, Ind.—As an additional sales help for Electrolux gas refrigerator salesmen, the Electrolux sales division of Servel, Inc. has prepared a bulletin featuring the use of Electrolux units on WPA, WPA, and FHA projects, and in other government installations.

The bulletin is designed for use in the salesman's presentation, where "testimonial" material of this kind may prove valuable.

Used Flatirons Distributed Free To Poor Families By York, Pa. Dealer

YORK, Pa.—Free distribution of nearly 200 used electric irons to families on relief gained considerable favorable publicity and goodwill for Modern Housekeeping Co. here recently. Modern Housekeeping is a local appliance dealer.

Applicants for the offer received cards from their local relief agency entitling them to one of the electric irons.

Outsell all others with Copeland

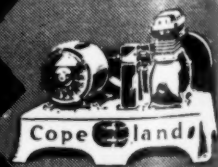
Commercial Refrigeration

The efficiency, economy and dependability of all Copeland Commercial Units make prospects easy to find, make sales easy to close. Our twenty years of leadership in commercial refrigeration are evident in every unit.

HIGHEST
EFFICIENCY!

LOWEST
OPERATING COST!

LONGEST TROUBLE-
FREE SERVICE!



COPELAND REFRIGERATION CORPORATION, Sidney, Ohio
INVESTIGATE COPELANDS COMPLETE LINE OF HOUSEHOLD REFRIGERATORS AND WATER COOLERS

The Ansul Distributor near you is anxious to give you More than just good service

Friendly Personal Service

Ansul distributors and jobbers, with complete stocks of Ansul refrigerants in seven different-sized cylinders, are more than just suppliers: They are friendly businessmen anxious to serve you completely . . . to your full satisfaction.

ANSUL CHEMICAL COMPANY • MARINETTE, WIS.



ANSUL SULPHUR DIOXIDE
METHYL CHLORIDE

THERE IS AN ANSUL DISTRIBUTOR NEAR YOU

Lincoln Businessmen Plan For Revival Of 'Crusade' Spirit

LINCOLN, Neb.—The National Salesmen's Crusade, launched here last spring, will soon receive a second "start" calculated to add new punch to the drive and boost fall and winter sales, according to Walter F. Krusz, general manager of the Lincoln chamber of commerce.

Second phase of the campaign entails cooperation of business firms in sponsoring sales contests and offering special bonuses to salesmen. This phase of the crusade, aimed at building fall and winter business volume, is needed to revive the "crusade spirit," which has naturally tended to fall off after the intense inaugural drive, Mr. Krusz says.

Lincoln business firms are heartily in accord with the projected second phase of the sales campaign, since last spring's drive brought thousands of dollars in sales, especially to household appliance dealers. Some of these firms are still using the "Sales Mean Jobs" slogan in their advertising, and are holding regular rallies for salesmen.

"Refrigerators and similar electrical appliances undoubtedly profited most from the campaign in Lincoln," Mr. Krusz declared, "because their dealers cooperated most heartily. They are now most enthusiastic in pledging support to the 'booster' movement."

Mail Order Houses Muffle Attacks on Fair Trade Acts

CHICAGO — Cessation of active and belligerent opposition by Sears, Roebuck & Co. and Montgomery Ward & Co. to fair trade laws and the minimum prices established under these regulations for certain nationally advertised brands of merchandise is indicated by comparison of the catalogs which these two large mail-order houses issued this fall and a year ago.

This year, although both companies still aggressively stress the lower cost of their private brand goods, their catalogs contain no direct reference to the cost of price fixing to the consumer, and even the comparison with nationally advertised brands is not so direct as it has been.

Last fall both companies took a militant stand against the fair trade laws, even to the point of including in their catalogs editorials on the effects of these statutes, emphasizing the higher prices which in some cases resulted from their passage.

They also inserted, on pages where nationally advertised merchandise was listed, notations calling attention to the lower price of corresponding private brand merchandise, and referring prospective purchasers to the anti-price-fixing editorials.

In the spring and summer catalogs issued by these companies, the direct references to price fixing and fair trade regulations were eliminated, and they did not reappear this fall. Despite this, both companies are still plugging their own brands hard, Montgomery Ward going even farther than Sears in its efforts to switch business to its own lines.

Sears and Ward explain elimination of the price-fixing editorials by stating that they were deviations from the usual policies of the companies, but that they thought their customers should be informed of the reasons underlying the price raises in some nationally advertised lines.

Obvious reason for the elimination of these editorials, however, was that the fair trade acts, which many people thought would prove to be potent ammunition in the fight to swing business to the mail-order brands, turned out to be valueless in this respect, due to the fact that most consumers are not at all interested in the reasons behind the prices they pay.

Both companies apparently deemed it inadvisable to place so much stress upon the matter, inasmuch as the laws applied to only a small part of the merchandise listed in the catalogs. Both companies are complying with the fair trade laws, even though they may not think that the statutes will last, and are now making no issue of them.

Cool Atmosphere Proves Aid To Tea Tasters

LONDON, England—A cool, clear atmosphere, produced by a 10-ton air-conditioning system, sharpens the sensitivity of tea tasters' jaded palates, according to the experience of the London Cooperative Wholesale Society, importers and exporters of fine teas.

Tea tasting, wine tasting, tobacco smelling, and coffee tasting have long been considered unusual talents. Scientists claim that the "taste" of anything is closely akin to the "smell" of the same substance, so a pure atmosphere is essential for the quaffing of fine wines of the sipping of imported tea.

The London Cooperative installation was designed for maintaining temperatures of 76° F. with 55% relative humidity in summer and a temperature of 68° and a 60% humidity in winter.

Equipment used consists of a 10-ton refrigeration machine and a shell-and-tube water cooler.

Rumors Say Crosley To Make Low-Priced Car

(Concluded from Page 1, Column 4) drop the name "radio" from the Crosley company title.

Rumors of Crosley's interest in automotive field have been floating around the radio industry for some time. In a recent story headlined "Car to Be Priced at \$300 Rumored a Possibility," Richard Pheatt, radio editor of the Toledo (Ohio) Blade, writes:

"Rumors persist that Crosley Radio Corp. plans to hop into the low cost automobile field. A story in a recent Radio Daily did nothing to stop the reports, with one of the vice presidents of the firm admitting the company has been thinking it over for a couple of years anyway."

"Gossip has it the car will sell under \$300, and will be made in the Richmond, Ind. plant, where refrigerator cabinets are made. The factory is said to be operating at about half its capacity."

Reno Expects Air-Conditioned Fire House To Keep Laddies In Pink of Condition

(Concluded from Page 1, Column 4) tower in the center of the building. Suspended on a sort of elevator at the top of the tower, the full lengths of hose hang straight down in such a way that they have ample opportunity to drain.

The tower is served by a blower system which circulates the warm, properly conditioned air from one end of the hose to the other. Since temperature and humidity required in the hose drying tower are far from ideal for human comfort, this space is closed off and is served by an individual blower.

Latest type compressors were used in the cooling system, which circulates 4,500 cu. ft. of completely conditioned air per minute for 24 hours a day. This constant operation is necessitated by the way in which the firefighting force is operated. Men are on duty 24 hours and off 24 hours. Some of the men are always on call during the period they're on duty;

all of them must be ready to go instantly on big fires.

Dehumidification of the air circulated in this system is not necessary, as Reno's climate is consistently dry both summer and winter. Humidification, however, is necessary at certain times during both seasons.

"I consider the system an excellent investment from an efficiency standpoint," says Fire Chief G. M. Twaddle, who should be qualified to talk on firefighting efficiency inasmuch as his department, through education and actual firefighting work, last year held the city's fire losses to only \$27,000 on property assessed at nearly \$35,000,000.

"It is only reasonable to suppose," the chief elucidated, "that a group of men who have been able to sleep well and who live in a comfortable atmosphere during their waking hours are in better condition to fight a fire. They are physically fit, their minds are unclouded by fatigue."

EVERY AIR CONDITIONING MAN SHOULD KNOW

A NUMBER OF FUNDAMENTALS CONCERNING AIR CONDITIONING AND REFRIGERANTS

IF the air conditioning installation is a sizable one involving a duct system, the duct system should conform to the rules published by the National Board of Fire Underwriters in NBFU Pamphlet No. 90 entitled, "Regulations of the National Board of Fire Underwriters for the Installation of Air Conditioning, Warm Air Heating, Air Cooling and Ventilating Systems" (July 15, 1937). These regulations are published by the Board at 85 John Street, New York City, or 222 West Adams Street, Chicago. See Paragraph 191 covering refrigerants and specify condensing equipment for permissible refrigerants.

If the system is a small commercial or air conditioning installation containing not over 100 pounds of refrigerant, design to conform to the "Standard For Air Conditioning and Commercial Refrigerating Equipment" (Subject 207, June 16, 1937)

of Underwriters' Laboratories, Inc., 207 East Ohio Street, Chicago. See Paragraphs 36 and 37 and draw specification for air conditioning refrigerants in accordance.

Should your client desire a unit system containing not more than 20 pounds of refrigerant, Underwriters' Laboratories, Inc., have a "Standard For Unit Refrigerating Systems" (Subject 207, June 15, 1937). Secure a copy of this standard and consult Paragraphs 29 and 30 for permissible refrigerants for air conditioning.

If you desire to consult Underwriters' Laboratories Report MH-2375 entitled, "The Comparative Life, Fire and Explosion Hazards of the Common Refrigerants," inquire at the reference desk of your Public Library. Or we will mail a copy, postpaid, on receipt of one dollar.

By following these rules, you avoid any possibility of penalty to your client in insurance rates for using refrigerating and air conditioning systems in non-conformance with regulations.

If you would be safe respecting refrigerants, specify the safe "Freon" refrigerants for air conditioning, which meet all the specifications of the National Board of Fire Underwriters and the Underwriters' Laboratories, Inc.

"Freon" refrigerants are non-toxic, non-flammable and non-injurious to foods, furs, books, paintings and other fragile and perishable articles.


FREON
REG. U. S. PAT. OFF.
safe refrigerants

*"Freon" is Kinetic's registered trade mark for its fluorine refrigerants.

KINETIC CHEMICALS, INC., TENTH & MARKET STREETS, WILMINGTON, DELAWARE

1937 Models Outsell 1938 Units 10-to-1 In Study of 1,500 Detroit Sales This Year

(Concluded from Page 1, Column 5)
purchasers, showed an average of only \$135.57 per unit sale; People's Outfitting Co., catering principally to a lower-income class, had an average unit sale of \$175.31.

Only 284 of the sales were for cash, or its c.o.d. or charge-account equivalent; and 243 of these were reported by one store.

Sales receipts on the 500 sales studied at Hudson's showed 30 trade-ins, at an average allowance of \$18.06, while those of the other two stores showed none. Good Housekeeping accepts no trade-ins, because of store policy.

Questionnaires sent to the 500 Hudson and People's Outfitting purchasers, however, told quite a different story. Of 209 replies from Hudson customers, 53 reported they had previously owned mechanical refrigerators; but only 22 said they had traded them in on the new units.

An equal number (22) said they had kept their old refrigerators, for use in summer cottages, other homes, etc., and seven others reported they had sold their old refrigerators privately.

This shows an actual replacement ownership among the 209 Hudson buyers of 25.4%, while the store's own experience with trade-in merchandise amounted to but about 6% on all 500 sales.

Ownership of 10 mechanical refrigerators when their new unit was

bought was shown by replies to a similar questionnaire received from 170 People's Outfitting Co. customers. Four of these reported keeping the old units, three said they traded-in, two said they had sold them privately, and no definite information was given on the one other unit.

Thus an actual replacement ownership of about 6% was shown among these reporting buyers, although the store's records indicated none definitely shown on the 500 sales studied. Department heads, however, had estimated their trade-in average might have been around 1%.

In addition to furnishing strong evidence that only a relatively small percentage of already-owned mechanical refrigerators are traded-in when new models are purchased, the This Week study also brought out interesting facts regarding buyers' occupational types, median rental districts in which their homes are located, whether they owned or rented their dwellings, model, year, and size of refrigerator purchased, and average price.

Despite the automobile industry's 1938 doldrums, persons associated with that industry accounted for more than one third of all the sales analyzed, the report shows. A total of 565 sales were made to persons in this general industry class, which includes, in addition to factory workers, others in auto trades such as

welders, tool and die workers, mechanics, service station and garage attendants, etc.

Factory workers alone accounted for 453 of the 1,500 sales studied, and the auto trades workers outside of factories for another 112.

The business and professional men's classification accounted for the second largest number of sales, 241. Only 166 of the 1,500 sales studied involved the purchase of a 1938 model refrigerator, the study reveals. This almost 10-to-1 preference for 1937 units, while it shows a definite "price consciousness" on the part of the buyers, might also be taken as an indication that surplus stocks of past-year models are being rapidly depleted—an optimistic omen for 1939.

Good Housekeeping Shop ran about at the general average on comparative sales of 1937 and 1938 models, with 453 units of 1937 manufacture compared to 47 "this year" units. Above-average was Hudson's, with 382 of the 1937 and 118 of the 1938 units. People's Outfitting had only one 1938 model sale shown in the 500 studied.

On average price for the 500 sales however, People's Outfitting far out-ranked the other two stores studied, with \$175.31. Good Housekeeping Shop was second high, with an average for its 500 sales of \$152.38, and Hudson's average was \$135.57. One apparent explanation of this is that People's salesmen "sell up" their refrigerator prospects to a higher priced, larger size model, while Hudson's let the customer make pretty much his own choice.

Another possible explanation may lie in the fact that all but 247 of Hudson's 500 sales were either for cash, c.o.d., or on monthly charge accounts, while People's reported but one cash sale out of its 500 total. Good Housekeeping showed a cash sales total of 40 out of its 500 sales studied.

Models of 5 and 6-cu. ft. capacity accounted for 1,260 of the 1,500 sales studied, with Good Housekeeping Shop having 447 of its 500 sales in that size range. People's Outfitting and Hudson's show 407 and 406 sales in that range, respectively.

People's led in sales of 4-cu. ft. and under models, with 79 units, and Hudson's with units of 7-cu. ft. capacity and larger, with 56 sales. Good Housekeeping was lowest in sales of the small-size models, with only 14, and second in larger unit sales, with 39.

Home owners among the 1,500 purchasers surveyed numbered 464, about 30%, while median rental districts of the buyers studied was pretty well concentrated in the \$44 and \$56 class, as shown in an accompanying table. Hudson's had most buyers in the highest rental class (\$71), 135, and People's the most in the lowest (\$34) class, 82.

How the 1,500 Buyers of Refrigerators Make Their Living

Buyers Classified by Job Types	J. L. Hudson Co.	Good Housekeeping Shop	People's Outfitting Co.	Totals By Job Types
Factory Workers	51	98	304	453
Auto Trades (Including Welders, Tool & Die Men, Garage & Service Sta.).....	38	51	23	112
Store & Office Workers (Retail Clerks, Stenographers, etc.)	97	34	17	148
Business & Professional Men	106	90	45	241
Building Trades Workers (Decorators, Painters, Plumbers, Bricklayers, Carpenters, etc.)	30	32	21	83
Salesmen (Including Insurance)	32	23	5	60
City & Government Employees (Letter Carriers, Mail Clerks, Police, Firemen, etc.).....	17	28	12	57
Engraving & Printing Trades	2	9	4	15
Personal Service (Barber, Beauty Operator, Nurse, Housekeeper, Caretaker, etc.)	13	25	18	56
Railroad Employees	4	6	12	22
Truck Drivers, Taxi Drivers & Chauffeurs (Including City Bus Operators).....	11	18	11	40
Food Store Workers (Grocers, Butchers, Clerks, Delivery Men, etc.)	23	26	5	54
Electricians	7	4	8	19
Retired (Including All Others Listed as Not Self-Supporting)	17	12	10	39
Miscellaneous Trades & Labor	52	44	5	101
Total	500	500	500	1,500

Sizes of Refrigerators Purchased and Prices Paid

	J. L. Hudson	Good Housekeeping	People's Outfitting
4 Cubic Feet and Under.....	38	14	79
5 Cubic Feet	166	222	206
6 Cubic Feet	240	225	201
7 Cubic Feet and Over.....	56	39	14
Average Price Paid	\$135.57	\$152.38	\$175.31
Cash Sales	243*	40	1

(*Also Includes C.O.D. and Charge Account Sales)

YEAR OF MANUFACTURE OF REFRIGERATOR PURCHASED

	J. L. Hudson	Good Housekeeping	People's Outfitting
1937 Model	382	453	499
1938 Model	118	47	1

Refrigerator Replacement Statistics on 1,500 Purchases

	J. L. Hudson	People's Outfitting
Trade-Ins Reported By Stores on 500 Sales.....	30	0
Previous Ownership of Mechanical Refrigerator Shown by Buyers' Replies to Questionnaire..... (209 Replies)	53	(170 Replies)
Percentage of Ownership Shown	25.4%	6%
What Buyers Did With Their Old Refrigerators		
Kept	22	4
Traded In	22	3
Sold	7	2
Gave Away	2	..
No Information	1
	53	10

Note: Good Housekeeping Shop does not accept trade-ins, because of store policy.

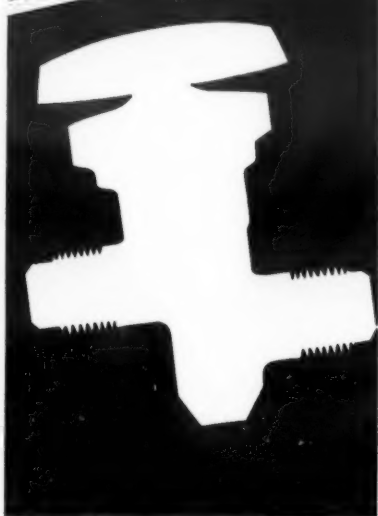
BUNDY TUBING



Bundy Contributes
Dependability

BUNDY TUBING CO.
DETROIT

DESIGNED ON A
NEW PRINCIPLE!
A LINE VALVE WITH OUTSTANDING
ADVANTAGES...



★
Triple-Seal....
Greatly Increased
Diaphragm Life..
Three-fold Action
and Single Turn
Opening.....
ON THE MARKET SOON

Watch for Announcement
by **MUELLER BRASS CO.**
PORT HURON, MICHIGAN, U. S. A.

Makes of Refrigerators Sold By Stores Studied

	J. L. Hudson	Good Housekeeping	People's Outfitting
Frigidaire	X	X	X
General Electric ..	X	X	X
Kelvinator	X	X	
Norge	X	X	X
Leonard			X
Westinghouse	X	X	
Apex	X		
Copeland	X		
Grunow		X	X
Hudson	X		
Sanicold			X
Universal	X	X	

Home Ownership & Rental Data

	J. L. Hudson	Good Housekeeping	People's Outfitting
Owned Homes	193	220	51
Renters	307	280	449
Location of Buyers' Dwelling by Median Rental Districts			
\$71	135	82	46
\$56	219	244	205
\$44	76	102	157
\$34	48	67	82

ADD TO YOUR PRODUCT
THE REPUTATION OF
PENN Controls
Write for Catalog
PENN ELECTRIC SWITCH CO.
GOSHEN, INDIANA

Air Conditioning

Toledo Air-Conditioning Distributor Finds Profits in Going After 'Repeat' Sales

TOLEDO—Repeat business created because customers have found air-conditioning systems to be profitable has been responsible for a rapid growth in the business of Hoffman & Harpst, Westinghouse distributor here.

Several examples of "repeat" business in the Toledo air-conditioning market were cited by G. P. Harpst as evidence of the present trend. A 10-ton installation made in Lane's store in 1936 has resulted in the sale of two Unitaire store conditioners for another Lane store this year, and the sale of a 40-ton well-water system in Lane's Super Store, which is well outside the downtown area.

FIVE YEARS LATER

During 1933 Hoffman & Harpst installed a total of 5 tons of air-cooling equipment in the old Abele Funeral Home. When the building was modernized last year, specifications for the project included a 7½-ton Westinghouse air-conditioning system.

Three years ago the company installed a well-water system to cool the ballroom of the Commodore Perry hotel. At the present time a 25-ton Freon direct-expansion system is being installed to serve the dining room and the new cocktail bar in the hotel.

FROM OFFICE TO HOME

Equipment installed for the Wine Railway Appliance Co. offices, amounting to 5 tons in 1934, was followed by a 15-ton system in 1936. Refrigeration was also installed in the residence of Ralph Tillman, president of the company, where 2½ tons of Westinghouse equipment maintain year-around comfort conditions, in connection with the heating system.

A complete summer and winter air-conditioning system, served by evaporative condensers has made the new United building a good investment, Mr. Harpst said. The United Savings Bank, owner of the building, has been well satisfied with the results obtained from the complete 30-ton Westinghouse system which serves the building. Operating cost has been unusually low because of the use of evaporative condensers.

Another interesting installation made by Hoffman & Harpst was a

7½-ton Freon system installed in the Osterman & Levy Jewelry Co. in 1936. The light load in this store was so great that no heating was required in winter, and during the summer months temperatures in the store became excessive. The Westinghouse system provides the necessary cooling and ventilation. No other equipment is necessary to maintain ideal year-around conditions.

FOR 'HAMBURGER' CHAIN

Several systems have been installed by the company for the White Hut Hamburger Co.'s chain of modernistic stores.

Questioned about the sale of self-contained store units, Mr. Harpst said that while they installed these units when the customer wanted them, they did not recommend them.

"We believe," Mr. Harpst said, "that much better air distribution is obtained from central station systems. The unitary store conditioners put out too much load in one place. We like to get better distribution of the cool air. Wherever possible we sell central station equipment."

The fact that Hoffman & Harpst has installed a number of well-water systems brought up the question of the trend in Toledo.

WELL WATER WARMS UP

Mr. Harpst has found that the well water available in the city of Toledo is getting warmer, and scarcer, every year. Summer temperatures go as high as 60°, making it impossible to handle any latent load at this point.

While a certain number of well-water systems are still in use, and some have been installed in recent months, Mr. Harpst believes that all air-conditioning systems in the Toledo area will eventually go to mechanical refrigeration.

At the present time the city of Toledo has no refrigeration or air-conditioning code, and no supervision is exercised by the city over the installation and operation of refrigeration systems. Mechanics do not need a license from the city.

All mechanical work in the Toledo area is handled by union labor including both new and old work, commercial and residential systems.

Prefabricated House Is Built For Air Control

EVANSTON, ILL.—Winter air conditioning has been incorporated into the prefabricated parts of a residence recently constructed by the All American Homes Co. here, under the supervision of Victor C. Carlson.

No sheet metal ducts are used in the building, which has hollow spaces for warm air cast into the concrete sections used for inside walls, and similar openings for cold air in the outside walls.

The home is an assembly of 82 sections, of which 12 are used for walls, and 32 for the floors. The sections were constructed in the Chicago factory of the All American Homes Co.

Winter air conditioning is supplied to the building by a Fitzgibbons air-conditioning unit located in the basement of the structure. The system was installed by the Nilson Bros. Plumbing & Heating Co. of Chicago.

Heat is forced into the wall panels of the building and conducted to the various rooms through conventional baseboard grilles. Return air is taken back to the furnace by the same means.

Walls of the building are insulated with 1 inch of Celotex, and the flat reinforced concrete roof is insulated with two separate layers of 1-inch Celotex.

It is claimed by the designers of the new home that the concrete walls are waterproof, and constructed to exclude sound, heat, cold, and dampness.

Historic 'Cliff House' In San Francisco Now Cooled

SAN FRANCISCO—Breaking into an air-conditioning market which has been slow to develop because of the equable climate here, William P. Goos, Inc. has installed 10 tons of General Electric air-cooling equipment in the historic Cliff House here.

Built in 1858 of lumber salvaged from a foundered ship, Cliff House has recently been rehabilitated by Whitney Bros. and has gained national attention as the scene of the recent motion picture, "Alexander's Ragtime Band."

The G-E system includes a 10 hp. condensing unit and heat is supplied by a large automatic gas furnace. The equipment handles 6,000 c.f.m., with both heating and cooling under thermostatic control.

Spending Program In Penn. Calls For Cooled Capitol

HARRISBURG, Pa.—A General State Authority construction program, one providing for \$32,744,619 worth of work at once and an expenditure of \$71,272,006 in the future, in which will be included air conditioning at the State Capitol, was approved Sept. 8 by Gov. George H. Earle.

A total of \$1,162,500 was set for air conditioning the Capitol.

A.S.H.V.E. Makes Plans For 1940 Meeting In Conjunction With Heating Exposition

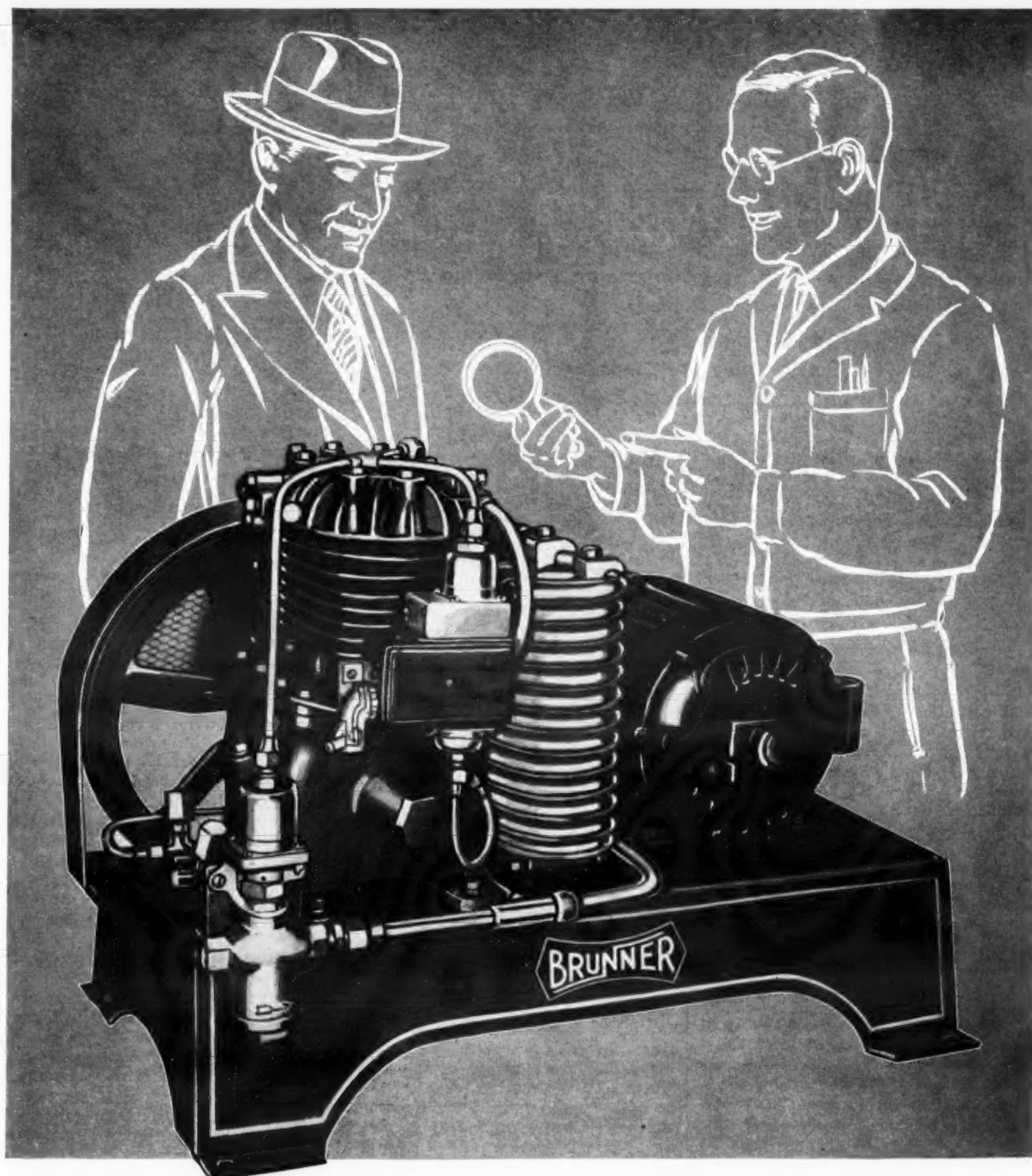
CLEVELAND—Forty-sixth annual meeting of the American Society of Heating & Ventilating Engineers will be held here Jan. 22 to 26, 1940, in conjunction with the Sixth International Heating & Ventilating Exposition, according to an official announcement by E. H. Gurney, Toronto (Ont.), A.S.H.V.E. president.

The annual meeting of the American Society of Refrigerating Engineers and the mid-winter meeting of the National Warm Air Heating & Air Conditioning Association also will be held in Cleveland during the same week.

Preliminary arrangements for the A.S.H.V.E. convention were completed

at a recent meeting of members of the northern Ohio chapter, including L. T. Avery, John Paul Jones, E. W. Gray, H. E. Wetzel, Philip Cohen, Prof. G. L. Tuve, and D. L. Taze.

The Heating and Ventilating Exposition, as in previous years, will be under the direction of the International Exposition Co. and the personal supervision of Charles F. Roth. More than 500 exhibitors are expected to display new heating, ventilating, and air-conditioning equipment in the Cleveland Public Hall.



BRUNNER DESIGNS SURELY PROVE THE VALUE OF SIMPLICITY

Even in theory, the production of mechanical refrigeration is a complicated process, requiring a complicated mechanism. But complication often paves the way to trouble—especially in the field of practical mechanics. Guided by this belief, Brunner engineers have constantly striven to eliminate detail, combine functioning members, simplify. The 1938 Brunner Refrigerating Equipment accents this goal. Solidly constructed for exacting commercial service, Brunner units are marked by an absence of non-essentials. No excess baggage! The result: trouble-free refrigeration, quick-to-repair should the occasion ever arise. Let us bring you full information on the NEW Brunner line—air and water-cooled condensing units for every refrigerating and air conditioning requirement from 100 lbs. to 15 tons of refrigeration. Write: Brunner Manufacturing Co., Utica, N. Y., U. S. A.

IT'S **BRUNNER** FOR *economical* SERVICE

Commercial Refrigeration

Luis Gibson Tells How Retailer Must Be Educated In Order To Make Sales Of Quick-Frozen Foods Profitable

Salesmen of mechanically refrigerated display cases have a fight on their hands in the field of frosted foods retailing. Some old prejudices have remained to confront them, and the main producers in the field seem more or less arrayed against them at the present time.

Only way for the commercial refrigerator salesman to beat such opposition is to do an outstanding selling job, to do which he must know everything about his subject. AIR CONDITIONING & REFRIGERATION NEWS is attempting to give its readers all available information about the frosted foods field.

That is why the NEWS is pleased to present the following report of a talk made by Luis Gibson at the Frozen Foods Conference held in conjunction with the recent National Food Distributors Convention in Cleveland.

Mr. Gibson is advertising manager for C. V. Hill & Co., manufacturer of a low-temperature display case, has written a book on "Modern Food Merchandising," and was at one time advertising counsel for one of the big producers of frozen foods. His talk will teach readers much about the industry which may some day lead the refrigeration business into greater prosperity.

CLEVELAND — What kind of stores should handle quick-frozen foods, how they should be displayed and stored, and the methods necessary to educate the public to buying them were described in a paper given by Luis Gibson, advertising manager of the C. V. Hill & Co., before the Frozen Foods Conference held in conjunction with the recent meeting of the National Food Distributors Association here.

"Dozens of times I have been asked 'What's new in frosted foods?'" began Mr. Gibson. "Headlines in the newspapers and trade journals shout 'Ten Thousand Retailers to Sell Frosted Foods in Year's Time!'"

"Whether there will be 10,000 outlets in a year's time I neither know nor care much. More important right now is the amount of frosted foods sold in each store. I would like to see a headline reading: 'Average Sales Per Store \$100.00 Weekly.' That would be real news and good news. The retailer supports the entire industry—he needs to be strengthened."

"Many a retailer has a frosted foods cabinet from which he is not selling \$20 weekly. That's hardly enough to pay him for handling them, or you for delivering them."

"Some retailers have given up

frosted foods. If a line of canned goods fails to sell in some particular store, no great harm is done—it just stays on the shelving a little longer and eventually passes across the counter. If frosted foods do not sell, that is different. Every frosted foods installation is on trial. Other retailers are watching, and so is the public.

"The pitiful and, at the same time, hopeful part of the situation is that sales per store need not be so low. They can be much higher. I know of stores selling not \$20 but \$200 per week, and these are not super-markets either."

"Think of the opportunity! Fruits, vegetables, poultry, and meats count for more than half of all food sales. Admittedly, not quite all fruits, vegetables, and meats are suitable for quick freezing, but, even so, sales of quick-frozen foods should account for more than 1 or 2% of a store's sales, as at present."

Frozen Foods Should Do 10% of Total Volume

"They can account for more. In some stores they already equal 10% of sales. At 10%, they are well worthwhile. A store doing \$1,000 a week then has a chance to sell \$100

per week of frosted foods. A \$2,000 a week store can sell \$200 per week of frosted foods."

What is the difference between a store that sells \$20 per week and a store that sells \$200 per week? Mr. Gibson asked.

It is a question of character, not size, according to Mr. Gibson.

Stores that cater to well-to-do trade, preferably to small families, apartment house dwellers, or to women who go to business—people who willingly pay a little more for something better or more convenient—are the best stores to handle these products, the speaker said. Modern women, he declared, will buy more frosted foods than the old-fashioned mother of six, at present. After frosted foods become better known and after prices come down, they will have a wider appeal.

If a store is of the right character, has the right attitude, and caters to the right class of trade, it makes but little difference whether it is a grocery store, a complete market, a delicatessen, or a meat market, the speaker asserted.

Meat Market Neglected; Is a Logical Outlet

"Perhaps the meat market has been neglected," he opined. "It should make a good outlet. In the early days of frosted foods, they were opposed by the butcher, who saw packaged meats as a threat to his skilled trade. Actually, quick-frozen meats have shown the least progress of all quick-frozen foods. The butcher has more to gain than to lose."

"By installing a frosted foods cabinet, the butcher can turn his store into a complete market carrying all foods under one roof. He can add fruits and vegetables without the skill, training, and experience otherwise necessary."

"Furthermore, quick-frozen poultry and quick-frozen fish are becoming increasingly popular. The butcher who handles them already has one foot in the frosted-foods business. Although usually sold in high-temperature cases, a low-temperature case is needed to keep them in the best possible condition. Once he has a low-temperature case for these products, the addition of the complete line is an easy step."

Frosted foods are yet a baby, Mr. Gibson pointed out. Frosting is a new idea in food preservation. Selling perishables in packages is a new idea in retailing. Cooking perishables without shelling, husking, or washing is a new idea in housekeeping.

"Like all new ideas, this idea of frosted foods must be popularized," Mr. Gibson declared. "Judging by the present promotion, I doubt if many realize how big the job is. If left to itself, the frosted-foods industry eventually will win out by sheer merit, but that takes time. With modern advertising, publicity, promotion, and propaganda, we can shorten the introductory period from years to months."

"What can be done about it? Let's start with the product itself."

fruits, vegetables, and other perishables to be standardized and branded in uniform grades. A few poor packages have been put on the market and, as a result, a few housewives say 'never again—I tried frosted foods once.'

"Do not load the dealer with non-salable items. There is no use in cluttering his cabinet with artichoke hearts, Persian melons, and others not called for once in a blue moon."

"Although I urge you to throw out the slow movers and the poor tasters, I, even so, suggest that one more item be added—and that is ice cream. Already it is being sold by many outlets. It always did belong in the food store, not in the drug store; it is a food product—an ideal dessert."

"The low-temperature cabinet used for frosted foods makes an ideal dispensing cabinet for packaged ice cream. Let's put it in the food store before drug stores add frosted foods to their rapidly growing line of everything from cosmetics to books."

Smart Packaging Is A Crying Need Now

"Next to the food itself comes the package."

"The baby needs to be dressed up. The leader in the industry shows a one-eyed eagle—the only one in captivity since the death of the NRA bird. Other packages show circles and bands, Eskimos and icicles."

"None are such as to whet the appetite, attract attention, suggest the advantages of frosted foods, or in any other way make it appreciated. They compare miserably with canned food wrappings."

"If the sellers of canned foods can afford full color natural pictures, despite the fact that the product is well known by users and despite the fact that it may retail for only 15 or 20 cents—then the sellers of frosted foods certainly should be able to afford attractive packages for a relatively unknown product selling at twice the price per package."

"Many say there is no use spending money to dress up a frosted-foods package because it is stored out of sight in the cabinet. That is only partially true."

"In the first place, display cabinets will be used more and more; and, in the second place, regardless of that, the package does create an impression, good or bad, when it is handed to the customer. Attractive dummy packages also can be used for display inside of the store."

"Here's another tip on packaging. Most frosted foods packages carry instructions or recipes. Over 90% of the women interviewed in a certain survey said that they would like to see such recipes changed frequently."

"Packaging can also do a great deal toward overcoming the real or fancied objection to price. How? Offhand, the selling price of all frosted foods appears exorbitant when compared with fresh. Buyers do not realize that one pound of frosted peas is the equivalent of about three pounds of fresh."

"Why cannot the approximate weight equivalent be printed right upon the package, in very bold and noticeable letters? If this has been done, I haven't seen it. Obvious, isn't it? Print the weight equivalent on the package where everyone will see it."

"The right kind of package will help each dealer to sell more frosted foods, but he must do his part by putting it in the right kind of a case and installing it in the right place. He must have a self-selling frosted-foods case."

Why Display Cases Must Win Out

"As mentioned, frosted foods are still babies and, like all babies, they must not be allowed out of sight. The frosted-foods case should be placed in a prominent part of the store, where it can be seen easily by everyone. Many stores have placed

the frosted-foods case right next to the fresh fruit and vegetable stand. The case itself should be attractive and noticeable."

"The display case will, I believe, replace the blind storage cabinet. The display case attracts more attention, shows the quality, and suggests a purchase. Certainly, no modern merchant would think of selling fresh meat, or any other fresh food, without a display case."

"Within two blocks of this convention is one of the oldest retailers in Cleveland—Chandler & Rudd. Every fixture in their store is designed for display, with the single exception of their frosted-foods cabinet—one of the supposedly blind storage type furnished for Birds Eye foods. You know, the kind of cabinet served through lids in the top."

"Well, they have thrown away two of the lids and covered the holes with a piece of plate glass. Below the plate glass they have placed a tray—all for the purpose of getting some display. It may be a crude makeshift, but their clerk tells me it greatly increased sales. Now people stop to look!"

"The first Hill frosted-foods cases, back in the early days, were high cases of the full display type, similar to a delicatessen case. The display compartment extended the full length of the case. These cases cost about \$1,500 in those days."

"Due to the high cost and the difficulty of keeping a large display compartment dressed with fresh frosted foods, the case was abandoned in favor of the more simple and less expensive blind storage cabinet. But the pendulum swung too far—now it's swinging back."

"The latest type of display cabinet developed for frosted foods by Hill has an illuminated display compartment large enough to show a varied assortment of foods, yet not too large. It neither takes too much time to dress nor requires too much stock."

"A picture below the display cabinet is in full color, a translucent photograph, illuminated from the rear. It attracts still more attention and tempts the appetite by showing the foods cooked and ready to serve."

"A space for 'specials' gives added merchandising power; and a price list completes the sale."

"Next in importance to selling the goods is serving them. It is a difficult task with ordinary cabinets. To make packages easy to find and to reach, the interior of the cabinet is fitted with a patented tray-veyor. This sliding tray-veyor is so easy to use that many stores, including the Sanitary Grocery Co., Washington, D. C., use it in self-service cabinets."

"A warning light flashes 'red' if temperatures rise, due to blowout of a fuse, or any other cause."

"Low height in such a case is important. If it were high, the market owner would be inclined to place it out of the way, alongside his regular meat case line-up. A low cabinet is easier to serve from and easier to talk over the top to customers."

"In spite of its many special features, a cabinet of this type costs only about one half as much as a high-grade fresh meat case 10 ft. long complete with compressor."

Experience Shows How Display Boosts Sales

Those who have had experience with frosted foods may ask "Is the display cabinet practicable? Won't frosted foods discolor when open for display?" said Mr. Gibson.

Some foods do fade slightly, he answered, but the trouble has been exaggerated. If the retailer is willing to change his frosted foods display every few days, he will have but little trouble. Certainly, that is no unheard-of obstacle. He cannot keep a cut, non-frosted steak on display more than 24 hours without its darkening, so why should he expect to keep frosted foods on display for a month at a time?

One Ohio retailer operates two stores, in one of which is a blind (Concluded on Page 7, Column 1)

FOR *Extraordinary* **CORROSION-RESISTANCE** IN AIR CONDITIONING EQUIPMENT! Specify **HUSSEY PURE LAKE COPPER**

Impure air, water and high humidities hold no terrors for Hussey Pure Lake Copper, recognized as the most enduring form of copper obtainable. Armored against corrosion by Nature itself, Hussey Pure Lake Copper ideally solves the corrosion problems of modern air conditioning equipment, adding years of service under the most adverse service conditions. Specify Hussey on your next air conditioning job—a great name in copper for more than 90 years.

C. G. HUSSEY & COMPANY
(Division of Copper Range Co.)
Rolling Mills and General Offices: Pittsburgh, Pa. Warehouse Stocks in the Principal Cities

Copper **HUSSEY** *Brass*

Quality All-Important; Ice Cream In Food Store

"Quality is everything in frosted foods. Their chief claim to distinction is that they at last permit

REMOVES HEAT QUICKLY

...so essential to milk protection

Artic
(DU PONT METHYL CHLORIDE)

For quick cooling, ice cream cabinets and milk coolers are equipped with ARTIC-charged units. In servicing these units, do as the manufacturers have done—use ARTIC (du Pont Methyl Chloride).

Stocks in standard containers in principal cities for prompt delivery.

DU PONT

E. I. du Pont de Nemours & Co., Inc.
THE R. & H. CHEMICALS DEPT.,
Wilmington, Del.

ARTIC THE PREFERRED METHYL CHLORIDE FOR SERVICE WORK

SERVE

COMMERCIAL REFRIGERATION and AIR CONDITIONING

Are your requirements large or small, standard or special? Serve can help you! Write today to Serve, Inc., Electric Refrigeration Division, Evansville, Ind.

Gibson Tells What Is Needed To Make Frozen Foods Boom

(Concluded from page 6, Column 5)

storage cabinet and in the other of which is a frosted foods display case. The sales of frosted foods from the display case are almost twice those from the blind storage cabinet.

There is no use of the retailer troubling with frosted foods unless he is going to sell a profitable quantity; and to sell a profitable quantity he must have sufficient cabinet capacity—about 350 lbs. as a minimum, Mr. Gibson declared.

The store, the package, and the display case all can do their part toward overcoming indifference and price objection, Mr. Gibson said, but success of the venture depends greatly upon the clerk behind the counter.

'ONE LB. EQUALS THREE'

When a shopper says to him "I cannot afford frosted foods for my family of seven," will he reply "Is that so?" or will he say "One pound of frosted peas equals 3 lbs. of peas in the pod?"

When some shopper says "I'll try frosted corn on the cob" will he reply "25 cents," or will he say "You'll like it, but be careful to read the directions and don't overcook?"

Will he suggest frosted foods from other counters in the store? Will he talk them up; will he suggest methods of cooking; will he be enthusiastic; will he use sentences that sell? No. He will not say the thing that sells unless he is first taught.

'SHOULD BE NURSED'

Frosted foods should not be dumped into a store and left to shift for themselves, Mr. Gibson warned. They should be nursed by a demonstrator. The first job of the demonstrator should be to educate the clerks who serve in the store, as well as to tell the customers who buy at the store. The clerks need both a teacher and a text book.

The demonstrator, the speaker said, should get the store off to a flying start and stay with it until everything is well under way. Her procedure should be systematized—what she says and what she does makes a difference.

Feed them first and talk to them afterward is a good rule. In other words, the demonstrator should offer her sample before, not after, she tells about the product.

"The housewife does not care a fiddle-stick for frosted foods—she is interested in what frosted foods do for her," Mr. Gibson asserted.

APPEALS TO HOUSEWIVES

"They'll hold her husband's love by making more tasty dishes; they'll keep him good natured by being cooked on time; they'll save her work, help her to keep up with the Joneses, and build healthy bodies for her children.

"Present these appeals and women will pay more for frosted foods than for other foods. The price strip and the cartoon now in favor are not sufficiently dramatic. The advertising can be given the realism of a page in the True Story Magazine. Why not? Frosted foods affect housekeeping—housekeeping is the woman's biggest job.

"Of course, price is still important. Women are born bargain hunters—that is why 'Weekly Specials' should not be forgotten. Items should be featured which compare favorably with the current fresh produce market. If fresh spinach is scarce, then 'special' frosted spinach to show a favorable contrast."

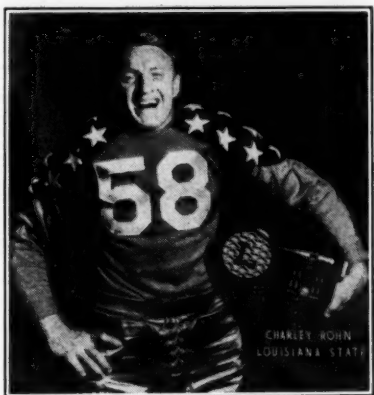
COOK BOOK NEEDED

The industry is waiting for a real "Frosted Foods Cook Book," Mr. Gibson said. Such a cook book should be so interesting, so enticing, and so well done that it will distinguish the foods. The average housewife is a miserable cook—she knows only a few recipes, over-cooks her meats and boils flavor out of her vegetables. Teach her how to cook and she'll credit frosted foods.

If the expense of a complete book is too great, the periodical distribution of recipe leaflets over the counter should be considered, he said.

Major Appliances

S-W Goes 'Collegiate'



Charley Rohn, Louisiana State, at the College All-Stars-Professional game, holds a Stewart-Warner radio, supplied in colors of any college.

S-W Radio Available In College Colors

CHICAGO—"Varsity," a new table-top radio available in the colors of any college, has been introduced by Stewart-Warner Corp. in an attempt to capitalize on the "show-your-colors" loyalty of undergraduates and alumni from coast to coast.

No school is slighted, the manufacturer states. Jobbers can order Varsity sets in the color combination of any college or university, and with a special raised initial or monogram on the speaker grille to further identify its owner's alma mater.

Body of the set is enameled in one of the school's colors, while control knobs, speaker grill, and cloth screen are of the other color.

The Varsity's multi-colored cabinet houses a five-tube a.c.-d.c. superheterodyne chassis equipped with four push buttons for automatic tuning and a five-inch dynamic speaker. Sets will receive standard broadcasts and one band of police calls.

Although cabinets for each order must be custom finished, the company reports that shipments of the Varsity can be made within a week from the time orders are received.

Bendix Sends Out 3 Teams To Cover U. S. In Sales Training Program

SOUTH BEND, Ind.—Launching an aggressive sales training and advertising campaign, Bendix Home Appliances, Inc. last week sent out three sales-promotion teams to cover the country from coast to coast within three weeks. These teams will travel more than 20,000 miles and will conduct some 50 retail sales and dealer meetings.

All three teams will be under the supervision of Judson S. Sayre, who will personally direct the team covering the Atlantic states. The team of Vernon Calkins, assistant sales manager, will cover the midwest and south, while Wm. H. Leininger, advertising manager, will head the team touring the southwest and the Pacific Coast.

The meetings are dedicated to Bendix retail salesmen, most of whom belong to the Bendix Hi-Flyers organization, a sales club composed of 7,000 such salesmen, and will be sponsored by Bendix distributors.

Included in each program will be an announcement of the company's extensive fall advertising plans, a new sales training course including four comprehensive slide films, an announcement of a \$27,000 retail sales contest, new dealer and salesman helps, and a sound movie of the new Bendix plant and its operations.

Commenting on general business conditions and their effect on the Bendix organization, Mr. Sayre pointed out that the company had doubled its sales personnel since the first of the year. Included among recent additions to the sales department were: N. F. Lawler, in charge of sales personnel training; H. A. Shooer, D. F. Gaches, W. A. Becker, H. F. Stroop, S. A. Kelsey, and I. H. Fought, special representatives.

Girl, 10, Demonstrates Electric Ironer

ALAMEDA, Calif.—Capitalizing upon the interest which most people have in young children, Franck's appliance store recently used a 10-year-old girl to carry on a window demonstration of electric ironers.

Appearing for short intervals on a recent Saturday, the young girl ironed dampened flat pieces such as towels and handkerchiefs with a deliberateness and precision which seemed to surprise and delight spectators.

Taking a towel from a bundle of unironed pieces, she would grasp it by the corners, smooth it on the table in front of the rollers, carefully run it through the machine, then finally place it, smooth and neatly folded, upon a pile of other finished pieces.

After ironing several pieces, she would pick up the usual printed cards advertising the ironer, hold them up for spectators to read, and then place them in a bracket.

The cards called attention to the ironer's various points of merit, to the terms on which it could be purchased. The last card carried an apropos slogan—"Even a child can iron this easy way."

Range Drive Ads Stress Low Operating Cost

NEW YORK CITY—Tie-in newspaper advertisements carrying the challenging slogan, "Electric Cooking Costs Only One Half as Much as You Think!" will play a leading part in dealers' participation in the electric range "Discovery Month" planned for October by Modern Kitchen Bureau.

The advertisements, already furnished to dealers all over the nation, invite homemakers to visit dealer showrooms and discover for themselves the economy of the electric range.

Other tools in the full kit of sales aids furnished to dealers by the bureau of this big fall drive include a special sales manual, written for the man in the field, outlining a step-by-step method to sales; use of actual consumer electric bills to show electric cookery's economy; window banners, and radio spot announcements.

Main aim of the campaign is to liquidate, once and for all, the mistaken idea that electric cooking is expensive. By doing this, the bureau believes, it will remove the last barrier to a flood of electric range sales.

Peerless Mfg. Corp. Installs Cooling In Radio Studios

LOUISVILLE, Ky.—Peerless Mfg. Corp. has installed air conditioning in the new studios of radio station WHAS here.

21 Radio Models In '39 Westinghouse Line

MANSFIELD, Ohio—Twenty-one different models, including a radio-phonograph combination, comprise the 1939 line of home radios offered by Westinghouse Electric & Mfg. Co.

The radio-phonograph model is of table-top size, encased in a hand-rubbed walnut cabinet. Radio is a five-tube a.c. superheterodyne receiver with a 5-inch dynamic speaker, tone control, and standard American and police broadcast bands. Phonograph turntable and pickup arm are mounted on top of the set, and can be covered by a hinged lid. The unit plays 10 and 12-inch records, and has a crystal pick-up.

There are 13 other table models in the Westinghouse radio line, ranging from the four-tube WR-150-I midget to the eight-tube WR-228, which has precision eye, phonograph connection, and three wave bands.

Of these 13 table models, five have instantaneous push-button tuning, all of them operating on alternating current except model WR-158, which operates on both a.c. and d.c.

Six of the eight manually operated table models are equipped for both a.c. and d.c., the other two being a.c. only.

All seven of the console models operate on a.c. only, and four have electric push-button tuning. These four are the most powerful sets in the entire line, two having eight tubes, the others 10 and 12 tubes.

Of the remaining three console models, two are standard upright types, and the other is a low arm-chair seven-tube set.

APPLIANCE SELLING TODAY

A book of sales ideas, promotion plans, and management methods for the electrical appliance dealer taken from the actual experiences of dealers who have successfully applied the methods described.

BUSINESS NEWS PUBLISHING CO.
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A Manual of Practical Sales Ideas and Promotion Plans

"APPLIANCE SELLING TODAY" is edited exclusively for the appliance distributor, dealer, and salesman.

This 128-page book is packed with hundreds of sales ideas, promotion methods, and merchandising plans tested and proved in actual use by dealers in all parts of the country.

There is no author's name on this book, and for a good reason: no one person wrote it.

"Appliance Selling Today" was written out of the actual experiences of electrical appliance dealers of all types and sizes, in all parts of the country. The reports show how such dealers have successfully applied various sales and management methods.

The records were compiled by staff members of AIR CONDITIONING & REFRIGERATION NEWS and its field correspondents, but the ideas and thoughts presented came from appliance dealers.

The editors of AIR CONDITIONING & REFRIGERATION NEWS believe that "Appliance Selling Today" is of greatest value to the dealer right now, for the reason that in no other period of appliance selling history has the dealer been so much "on his own."

Merchandising operations of the retailer are no longer so closely guided by the manufacturer, and intra-industry agreements have cut down on the amount of sales helps the manufacturers can offer in the way of contests and the like.

Thus, the dealer has been left pretty much to figure out his own sales and promotion plans and to devise schemes to keep his selling operations at a high pitch. It is the hope of the editors that the description of tested methods given in "Appliance Selling Today" may be of some assistance to him in working out plans to fit his particular needs.

Get this book FREE with your subscription to the News

BUSINESS NEWS PUBLISHING CO.
5229 Cass Ave., Detroit, Mich.

☐ Please send me a copy of "Appliance Selling Today." I am enclosing \$1.00. (Add 50 cents for shipment outside the U. S.)

☐ Please enter my subscription to AIR CONDITIONING & REFRIGERATION NEWS for one year and also send me a FREE copy of "Appliance Selling Today." I am enclosing \$4.00*. (This offer expires Dec. 31, 1938.)

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Street.....

City..... State.....

*This rate applies to the United States and Possessions, Canada, and countries in the Pan-American Postal Union. For all other countries the rate is \$6.00.
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New Models Due In January

PRESENT indications are that 1939 refrigerator models will not be brought out until the forepart of next January. Most of the leading manufacturers are now telling their distributors that showings of the new lines will be saved until the formal presentations at January and February dealer meetings.

Thus 1938 will be a year without new model introductions; for the 1938 models were brought out in October and November of last year.

Sad Experience With Carry-Overs This Year

At least two good reasons can be stated in explanation and support of this return to the old policy of bringing out new models at the beginning of the new year, instead of following the more recent practice of making pre-Christmas announcements.

First, the industry had a sad experience with carry-overs this year, an experience which it will go to considerable lengths to avoid in the future. By saving the new models until January, more time will be granted to dealers for cleaning up stocks of current models. Christmas sales during the last two seasons have practically all been made from the new lines, even though large stocks of the old models were always on hand at lower prices. This season the new Christmas refrigerator for mother must be a 1938 model (unless there are still some 1937's left then!).

Difficult to Interest Dealers at Year's End

Second, the refrigeration industry has found it awkward to announce and launch new models at the end of the year. It conflicts with Christmas sales, with the year's-end holidays, and with dealer psychology. By far the best time to get dealers steamed up about a new line, experienced sales managers claim, is shortly after New Year's Day.

As soon as his holiday headache has cleared away, and his eyes can focus upon the holiday bills, the average merchant wants to get back to work in a hurry; and is ready to start the new year with renewed energy and full of good resolutions.

Most sales managers look for a considerably better year for refrigeration in 1939, and proposed manufacturing schedules range from 10 to 20% larger than were laid out for 1938.

Retail Sales Much Higher Than Manufacturers' In '38

Household refrigeration sales by manufacturers are down 45% from the 1937 figure. However, that does not give a true picture of retail sales. There was a carry-over of some 600,000 household units at the beginning of 1938; and most of these have been sold. In addition, a large number of 1937 models were sold twice—once in 1937, and again in 1938. Repossessions jumped alarmingly during the forepart of the year. These repossessed jobs, forced to compete with new 1937 and 1938 models, were dumped at distress prices.

As a result of repossessions and carry-overs, a considerable portion of this year's refrigeration business has been done at a loss to everyone concerned except the consumers, who have had a continuous field day of bargains.

Brighter Picture Foreseen For 1939

Next year this picture should be altered. A tighter rein on credit, plus slowly improving general business conditions, should prevent the debacle of repossessions from recurring. And the combination of curtailed production, hand-to-mouth buying, and a longer selling season seems destined to reduce stocks of 1938 models to the point where carry-overs may be a relatively insignificant item in 1939. And the new models, due in January, are likely to carry some interesting innovations with plenty of sales appeal.

LETTERS

They Had a Boycott In Baltimore, Too

Air Conditioning, Inc.
119 St. Charles St.
Baltimore, Md.

Editor:

I read with a great deal of interest your article in the Aug. 24 issue on "Hotel Men's Boycott Broken in Philadelphia Air-Conditioning Market."

You may be interested to know that we were faced with the same problem in Baltimore and very recently broke the same decision that hotel managers had mutually agreed upon here in Baltimore, by selling the Lord Baltimore Hotel 10 Carrier portable units. The negotiations were handled by our Mr. M. B. Garrison.

I thought perhaps you might be interested also in knowing that in spite of the general recession, Air Conditioning, Inc., with whom I am now associated, have enlarged their showrooms and have made some tremendous advances in air-conditioning sales in this Baltimore market despite the much discussed recession in business. I should be very happy to give you some figures as to the tonnage sold in this market as well as some interesting photographs that would have any publicity value to you.

I haven't had the pleasure of seeing you since the last Kelvinator conclave in Detroit but sincerely hope if you come to Baltimore that you will take

the opportunity to drop in our showrooms and renew an acquaintance-ship which I regretted not having the opportunity to further the seven years I was associated with Kelvinator.

H. D. MURRAY

Sampson Tells What He Really Meant

Sampson Electric Co.
3201 S. Michigan Ave.
Chicago, Ill.

Editor:

I don't know whether you are responsible for the publicity given me in your issue of Sept. 7, but I am addressing you anyhow.

I am sorry that in the perusal of the bulletin that went out to all of our dealers, I wasn't given credit for at least having enough sense to realize that no advertiser should expect to control the editorial policies of the newspaper he uses.

My bulletin was directed at those newspapers, who, in the past several years, have seemed to delight in playing up every bit of depressing and discouraging news as it was being manufactured, and relegating anything that might have been cheerful to spots that were mighty hard to find.

The other day I received a copy of a letter written you by D. Earle Rogers, the Kelvinator distributor at Wheeling, W. Va., and I believe that Mr. Rogers has told you, even better than I could, just where I stand. It seems to me that if Mr. Rogers, whom I have never had the pleasure of meeting, was able to get the point of my argument, that you, who know me, should have been able to do so also.

Well, those things will happen. I guess anybody who speaks his piece can expect to be misunderstood once in a while. I may be partially at fault, because there was a paragraph that should have been incorporated in our bulletin, that, in error, was left out. For your information and to close the subject, I am quoting the missing paragraph herewith:

"Don't misunderstand me. I would not be so foolish as to suggest that pressure be applied to induce any newspaper to flavor its news to please the appetite of its advertisers. I want the newspapers I read to present the news as it is made. I realize we have had much to undergo and read about during the past several years that has been discouraging and depressing. But there is always a ray of sunshine to be reported somewhere and some papers seem to have taken especial precaution to prevent the sounding of an encouraging note of any kind on their front pages."

PETER SAMPSON,
President

Hesitancy About Export Marketing

Universal Commerce
RKO Building
Rockefeller Center
New York, N. Y.

Sept. 13, 1938

Editor:

Congratulations upon your fine editorial "Export ABC's."

Do you suppose the hesitancy on the part of many manufacturers interested in the air conditioning and refrigeration industry is due to a

They'll Do It Every Time . . . By Jimmy Hatlo



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EXCHANGING A FEW
PLEASANTIES WITH
THE WATCHDOG OF
THE STOCKROOM—
THEY'LL DO IT EVERY
TIME
THANK TO TED CLINE—TULSA

lack of understanding of these fundamentals or more the desire to keep their own back yard fences repaired during these times of stress?

Just to let you know how we feel about this industry, I am sending you under separate cover a copy of our August English and September Spanish editions and call your attention to our special department on Refrigeration and Air-Conditioning service, edited by Mr. F. O. Jordan.

Your recent 'round the world trip, which I followed with keen interest, revealed the unlimited possibilities for refrigeration and air conditioning. It is too bad that American manufacturers are not blessed with a greater vision. The opportunities that are knocking at the door of this industry would warm the cockles of the heart of many a manufacturer, if they could realize the little difference there is between national and international trade.

E. B. HEESELER,
Editor

'Easy to Agree' With Berle Report

Brass & Copper Sales Co.
Air Conditioning and Refrigeration
Supplies
2817 Laclede Ave., St. Louis
Sept. 16, 1938

Editor:

I have just read the entire article printed in the issue of Sept. 7, quoting Mr. Berle's Study on Monopoly. His recommended approach seems very fair, and I find it quite easy to agree with many of his thoughts.

HOWARD H. HUBBELL

B. T. Umor 'Takes Chill From Recession'

Gaertner Electric Co.
3521 North Grand Blvd.
St. Louis, Mo.

Sirs:

Please favor us by sending the expiration date of our subscription to your publication, AIR CONDITIONING & REFRIGERATION NEWS.

We consider it the most important publication in the appliance field, and do not wish to miss a single copy.

How "B.T.U." gets around! His Cold Canvass takes the chill out of our "recession dispositions" regularly.

P. B. McNAMARA,
Sales Manager

Was This Chapel Installation Poor?

Fairbanks, Morse & Co.
49 Central Ave., Cincinnati, Ohio

Editor:

I note on page 9 of the Aug. 31 issue of the AIR CONDITIONING & REFRIGERATION NEWS an unusual photograph picturing the interior of a chapel that was being air conditioned by eight self-contained units.

No doubt, this picture holds a great deal of sales interest, but I wondered if anyone gave much thought to the practicability of this installation.

Assuming that these units would have a net capacity of approximately 8,000 B.t.u. each, the total capacity of the entire installation (eight units) would only be equal to approximately

5½ tons of refrigerating effect. This, you will have to agree, would be inadequate for a chapel of the size pictured, especially when fully occupied.

I am bringing this to your attention so that others may avoid the practice of such installations which will eventually be detrimental to the future sale of air-conditioning equipment.

J. T. MALONEY,
Mgr., Air Conditioning Dept.

Knack of Getting News of Real Interest

Frick Co., Inc.
Waynesboro, Pa.
Sept. 14, 1938

Editor:

You seem to have the knack of getting into your paper news that is of real interest to the members of the industry. I was particularly impressed by this upon reading your Sept. 7 issue. I believe you can truthfully say you have "the newspaper of the industry." May I add to the many you must receive, my congratulations and best wishes for your continued success.

W. H. AUBREY,
Vice Pres. & Sales Manager,
Ice & Refg. Mch. Department

Exhibition Promotion 'Clever Set-up'

Chicago Seal Co.
9 S. Clinton St., Chicago, Ill.

F. M. Cockrell:

I wish to acknowledge your letter of Sept. 15 and particularly your comment upon the four-page broadside which you attached.

I think that this is one of the most clever setups I have ever seen. It not only tells the story completely, but packs a terrific punch and is going to go a long way towards making our All-Industry Exhibition a huge success.

HERMAN GOLDBERG

Likes The News, And Orders Manuals

Bartley, W. Va.

Sirs:

Find enclosed a check for \$3.00. Please send me the following books: Commercial Manual C-1, Commercial Manual C-2, Commercial Manual C-3.

I wish to compliment you on the publication of such a fine paper as the AIR CONDITIONING & REFRIGERATION NEWS.

WILLIAM T. MILLER

Manuals 'Only Thing For Service Man'

Industry, Pa.

Sirs:

Please send me the price of your air-conditioning and refrigeration books namely, Master Service Manual, Refrigeration and Air Conditioning Specifications, etc.

I am a graduate of Air Conditioning Training Corp. They had a complete set of your books and I think they are the only thing for a service man.

W. PAUL GRAHAM

Air Conditioning

Bowling Alleys In Baltimore Prove Market For Large-Sized Conditioning Systems

BALTIMORE—Bowling has become one of the country's most popular indoor sports. Addicts claim more people bowl than play golf. Operators of bowling establishments see a fast growing business, aided in its spectacular rise by air conditioning.

An answer to the problem of how to fill large and expensive bowling alleys by drawing from the estimated 100,000 people who bowl here in winter, has been found in the use of air-cooling equipment. Several of the city's best establishments are already equipped, and others plan to install systems before next year.

20-HP. SYSTEM

First air-conditioning system used in a bowling alley here was installed last year in the Recreation Center, operated by Julius and Herbert Friedberg. The business occupies a five-story building with 20 alleys to the floor, a total of 100 alleys.

Equipment installed on the second floor of the building by Air Conditioning, Inc., Carrier distributor, includes a 20-hp. compressor and a 3-hp. conditioning unit. The floor is 130 by 104 by 12 feet high.

CENTER COOLING EFFECT

Described as a "spot-cooling" job, capacity of the system is centered on the space between the bowler's benches and the foul line. Cool air is carried to this point by a duct system and distributed by ejector type grilles, maintaining a temperature of 78° in the space.

Following the success of the second floor system, Herbert Friedberg ordered a 35-ton system from the same concern to serve the first floor of the building. A similar system was installed, but air distribution for the first floor is by means of five anemostats.

Mr. Friedberg reports that a substantial gain in business has resulted since the installation of the two systems, and the company plans to build another bowling plant, to be known as the Spillway Bowling Alleys, which will be equipped with a 45-ton year-around air-conditioning system.

EXPERIMENT PROVES IT

A 20-ton Carrier air-conditioning system, installed on the first floor of the Charles Bowling Alleys, has resulted in the air-cooled alleys being crowded at night while the second-floor alleys are deserted, reports Sol Schechter, manager of the business. Mr. Schechter plans to air condition the second floor before another summer begins.

Imperial Bowling Alleys, one of the newest Baltimore plants, is equipped with a 50-hp. direct-expansion Freon system, powered by two Frick compressors, and equipped with an evaporative condenser. The system has Minneapolis-Honeywell controls.

Installed by the Paul J. Vincent Co., air-conditioning engineers, the duct system handles both cool and warm air for maintenance of year-around comfort. Heat is generated by an oil-burning system.

FANS REMOVE SMOKE

Four Autovent Fan & Blower Co. exhaust fans were installed by the Vincent company to relieve smoke conditions in the building. The fans are operated in pairs.

John E. Ferguson, operator of Imperial Bowling Alleys, plans to air condition two other Baltimore establishments which he owns.

St. Paul Bowling Alleys, operated by Walter Scott, is equipped with a 30-ton Frick system which serves 18 alleys on the second floor. This system is also of the "spot-cooling" type.

Usual Circumstances Reversed as Mortuary Is Designed With Air Conditioning In View

ROANOKE, Va.—Two General Electric central-station conditioning units, powered by one two-speed condensing unit, and supplemented by a deep well drilled through 400 feet of solid limestone, forms the basis of the air-conditioning equipment used in the new John W. Oakey, Inc. mortuary.

Designed by Smithey & Boynton, and supervised by R. V. Dodge, air-conditioning engineer, the system was installed by the Richardson-Wayland Corp.

SYSTEM IS SPLIT

The mortuary was designed with air conditioning in mind, and the system was divided into two separate units, known as the "central" unit and the "chapel" unit. The latter, which serves the chapel, family room, choir room, and minister's room, operates only when these rooms are in use.

The central unit is equipped with Aerofin coils of 15-ton capacity. Eighty gallons of well water per minute are raised 5° F. in passing through the coils, then used to cool the compressor, and finally passed to a storm drain.

PNEUMATIC CONTROLS

A pneumatic system makes zone control completely automatic. It is arranged for three seasonal operations of heating, cooling, and ventilating. Any desired indoor weather can be maintained by the manipulation of an air switch on the central control board.

Control of the chapel unit is by means of a solenoid air valve on the control panel which actuates Freon and steam valves in lines running to the chapel system. Thermostats in the various rooms control the central conditioning unit.

For the heating cycle, an insertion thermostat in the return air duct will open the minimum fresh air

dampers when the temperature reaches 68° F., and will operate on the intermediate acting steam valve to maintain a uniform temperature of 70° F. in all rooms served by the chapel unit.

CONTROL METHODS

Above 70° the steam valve closes, and if the temperature continues to rise, the maximum fresh air damper will open and the return damper close.

The ventilating cycle works in the same way, except that the steam valve remains closed at all times. The cooling cycle is governed by an insertion thermostat in the return air duct, which controls a positive acting Freon valve.

Exhaust fans located on the roof of the building draw air from the second floor operating rooms and discharge it from the building to prevent its being recirculated.

Conditioned air is distributed to the chapel by a high grille located in the front wall about 20 feet from the floor, and by other grilles in each window sill.

Adjacent to and directly connected with the main building, although in a separate structure, are the administrative offices. The lower portion of this building has complete air conditioning during the summer, concealed ductwork from the central system serving each room.

SPECIAL FIXTURES

A display room on the third floor of the building, built entirely without windows, is served by ceiling fixtures combining air conditioning and indirect lighting.

Control of the system is arranged in a manner that permits either the "central" or the "chapel" conditioning unit to draw on the full capacity of the compressor. This arrangement keeps all rooms comfortable, regardless of the occupancy load.

Speaking Assignments Announced By A.S.H.V.E.

NEW YORK CITY—Plans for the 1938-1939 activity of the American Society of Heating & Ventilating Engineers speakers' bureau, including subjects chosen by prominent speakers who will address local chapters, have been announced by W. A. Russell, chairman of the speakers bureau committee.

The following authorities have accepted assignments for the year:

Frank B. Rowley, director, engineering experiment station, University of Minnesota, "Condensation Within Walls"; A. P. Kratz, research professor of mechanical engineering, engineering experiment station, University of Illinois, "Warm Air Furnace Research"; T. H. Urdahl, consulting engineer, Washington, D. C., "Quantitative Analysis of Weather."

M. E. Fahnestock, research assistant professor, University of Illinois, "Studies in Summer Air Conditioning for Residences"; J. H. Walker, superintendent and chief engineer, Detroit Edison Co., "Air Conditioning in a Glass Brick Building"; C. H. Randolph, Milwaukee Electric Railway & Light Co., "Air Distribution"; Prof. B. M. Woods, head of the department of mechanical engineering, University of California, "What Next in Air Conditioning."

Albert Buenger, Delco-Frigidaire Conditioning Corp., "Reducing the Cost of Air Conditioning"; H. F. Hutzel, manager, technical and training department, Nash-Kelvinator Corp., "Cooling Load Calculations."

Evaporative Condenser On Banana Room Job Will Heat Building

COLUMBUS, Ohio — Heat discharged from an evaporative condenser connected to four compressors serving banana and storage rooms in the plant of Wm. M. Fisher & Sons here will be used to keep the building interior above freezing in winter, reports DeWitt H. Wyatt, head of the General Refrigeration Sales Co. branch here.

First installation of mechanical refrigeration for banana and storage work was made in the Fisher establishment by Mr. Wyatt, four years ago. The following year another storage unit was added, and last year two more rooms were equipped.

Installation of the evaporative condenser is being made at present, the unit having four separate circuits to take care of the four compressors serving the various storage and banana rooms. Heat from the condenser is discharged through a 30 x 30-inch shaft duct through the three stories of the building, and through the roof.

In the winter, a damper will close the outside discharge, and scoop dampers on each floor will discharge the heat within the building. The four compressors should discharge enough heat to maintain a temperature above freezing in the building, even in zero weather, Mr. Wyatt believes. He says it will be the first three-story building in Columbus to be heated by electricity.

Special Drying Unit Makes Candy Better

CHICAGO—Control of the drying process for the production of a better grade of candy led to the recent installation of an air-conditioning dryer in the plant of E. J. Brach & Son Co., candy manufacturers here.

Automatic temperature control was necessary to maintain a 140° reading in the room for drying freshly-made candy. Control of temperature is maintained by an air-conditioning unit, regulated by a thermostat in the return air duct which operates a modulating steam valve on the coil. Special ejector nozzles give uniform air distribution.

A similar installation has been made in the Johnson Fluker Co. of Atlanta, where air-conditioning equipment was installed in the marsh-mallow drying room, candy center drying room, and chocolate dipping room.

Temperatures ranging from 100° to 120° F. are maintained in the dryer, and 68° F. in the dipping room, with humidity at 40% in the latter.

Filter Firm Appoints Representatives In East

CHICAGO—Appointment of F. H. Herzsch and Robert Arnold Sales & Engineering Co. as representatives in the New York and Philadelphia territories, respectively, has been announced by Independent Air Filter Co. here.

KEROTEST MANUFACTURING COMPANY, PITTSBURGH, PA.

First All-Industry Refrigeration & Air Conditioning EXHIBITION

Hotel Stevens, Chicago, Jan. 16 to 19, 1939

Partial List of Exhibitors

Note: Complete list, with products to be shown, also detailed program, etc., will be published in the 500th issue of the NEWS to appear Oct. 19, 1938.

	Space
Acme Industries, Inc., Jackson, Mich.....	1
Aerovox Corp., Brooklyn, N. Y.....	2
Air-Maze Corp., Cleveland, Ohio.....	144
Alco Valve Co., Inc., Maplewood, Mo.....	79-80
American Brass Co., Waterbury, Conn.....	143
American Injector Co., Detroit, Mich.....	123
Ansul Chemical Co., Marinette, Wis.....	77-78
Automatic Products Co., Milwaukee, Wis.....	92
Binks Mfg. Co., Chicago, Ill.....	9-10
Bonney Forge & Tool Works, Allentown, Pa.....	98
Bush Mfg. Co., Hartford, Conn.....	85-86
Business News Publishing Co., Detroit, Mich.....	110-111
Chase Brass & Copper Co., Waterbury, Conn.....	93
Chicago Wilcox Mfg. Co., Chicago, Ill.....	115
Commercial Coil Co., Chicago, Ill.....	142
Copeland Refrigeration Corp., Sidney, Ohio.....	87
Dayton Rubber Mfg. Co., Dayton, Ohio.....	90
Detroit Lubricator Co., Detroit, Mich.....	88-109
Dole Refrigerating Co., Chicago, Ill.....	96
Du Pont de Nemours & Co., Inc., Wilmington, Dela.....	102
Duro Metal Products Co., Chicago, Ill.....	105
Electromatic Corp., Chicago, Ill.....	122
Fedders Mfg. Co., Inc., Buffalo, N. Y.....	99-100
Gates Rubber Co., Denver, Colo.....	130
L. H. Gilmer Co., Philadelphia, Pa.....	108
Henry Valve Co., Chicago, Ill.....	103-104
Imperial Brass Mfg. Co., Chicago, Ill.....	137-138-139
Kerotest Mfg. Co., Pittsburgh, Pa.....	97
Larkin Coils, Inc., Atlanta, Ga.....	132
M. Leitner & Co., Chicago, Ill.....	7
Marlo Coil Co., St. Louis, Mo.....	67-68
Jas. P. Marsh Co., Chicago, Ill.....	121
Maurey Mfg. Co., Chicago, Ill.....	133
McIntire Connector Co., Newark, N. J.....	129
Mills Novelty Co., Chicago, Ill.....	127-128
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.....	140-141
Modern Equipment Corp., Defiance, Ohio.....	4-5-6
Mueller Brass Co., Port Huron, Mich.....	101
National Refrigeration Supply Jobbers Association, Chicago, Ill.....	65
Peerless of America, Inc., Chicago, Ill.....	116-17-18
Penn Electric Switch Co., Goshen, Ind.....	81-82
Perfection Refrigeration Parts Co., Harvey, Ill.....	89
Ranco, Inc., Columbus, Ohio.....	106-107
Refrigeration & Air Conditioning Institute, Chicago, Ill.....	18-19-20
Refrigeration Service Engineers Society, Chicago, Ill.....	136
Refrigeration Specialties Co., Chicago, Ill.....	8
Riley Engineering Co., Detroit, Mich.....	120
Spoehrer Lange Co., Inc., St. Louis, Mo.....	126
Superior Valve & Fittings Co., Pittsburgh, Pa.....	119
Tecumseh Products Co., Tecumseh, Mich.....	113-114
Universal Cooler Corp., Detroit, Mich.....	131
Van Cleef Bros., Chicago, Ill.....	95
Victor Mfg. & Gasket Co., Chicago, Ill.....	94
Virginia Smelting Co., West Norfolk, Va.....	112
Wagner Electric Corp., Chicago, Ill.....	125
Wolverine Tube Co., Detroit, Mich.....	83
Zenith Carburetor Co., Detroit, Mich.....	124

Write to R. M. McClure, Executive Secretary, Refrigeration Supplies & Parts Association, 111 W. Washington St., Chicago, Ill. for information regarding available space.

Service News

Service Man Makes Dreams Come True, Builds Own Boat For Hawaiian Round-Trip

LOS ANGELES—Avast, there, you landlubber service men, and listen to the yarn of one of your fellows who did what many of you probably will only dream about for the rest of your days.

Bill Crowe was a refrigeration service man here in Los Angeles, but the sea was in his blood. He'd built himself a ship several years ago with the idea of cruising up and down the Pacific coast.

She was a 26-footer of the sea bird type, with a small cabin and a four-cylinder auxiliary motor. Bill named her the "Corvus," Latin for crow.

When he had her finished, he decided to sail to Hawaii, so two years ago last June, Bill and his wife weighed anchor and headed westward.

In 21 days they covered the 2,400 miles to Honolulu. Mrs. Crowe said she saw little of the horizon because the boat was always plunging down into troughs.

For six months they cruised around the islands, visiting friends and living on board the Corvus all the time.

Then they decided to build a new



IS ACTIVATED ALUMINA ANOTHER TYPEWRITER?

(Production of a workable typewriter in 1874 revolutionized business practice, brought women into a sphere previously occupied only by men.)

Is it true of Activated Alumina—another new product bringing a different principle in this case, vitally important to the development of comfort air conditioning?

Ask your engineers to judge. The facts already established are, in outline, these: 1. Activated Alumina has proved its economy for dehumidification. 2. It adsorbs moisture from air efficiently; is inert, and has good physical properties. 3. Equipment using Activated Alumina controls humidity effectively, as many industrial installations prove. 4. It reduces humidity for summer conditioning, giving an invigorating atmosphere, never clammy or shocking.

If your engineering staff sees possibilities for Activated Alumina in your system, we will gladly send pertinent data. ALUMINUM ORE COMPANY. Sales Agent: ALUMINUM COMPANY OF AMERICA, 1908 Gulf Building, Pittsburgh, Pennsylvania.

ALORCO

**ACTIVATED
ALUMINA**
FOR REDUCING HUMIDITY



(Above) The "Lang Syne" brings Bill Crowe home from his long voyage. (Below) The skipper and his wife. (Pictures by L. P. Roth of Refrigeration Service, Inc., Los Angeles.)

boat to sail back home in. Bill leased a vacant lot, borrowed, rented, and bought tools and lumber, and started to work.

When the hull was ready for launching, the new ship was christened the "Lang Syne." Bill sold the Corvus, and proceeded to finish up his new craft. He and his wife did all the work, with the exception of making the sails.

The Lang Syne, when finished, was a handsome two-masted schooner of the double ended type. She was 39 feet long, had a four-cylinder auxiliary motor, was equipped with 35-gallon tanks to hold 210 gallons of drinking water, and had seven tons of iron and concrete ballast in her keel.

Two days after she was completed, the Lang Syne was headed out to sea with Bill at the wheel.

Against steady headwinds, Bill had to tack continuously. They ran into heavy weather and fog, and Bill veered to the northeast.

When at last they came to better sailing water, they were opposite the

mouth of the Columbia River, from where they worked their way down the coast to Los Angeles.

At one time on their homeward voyage, Bill and his wife were becalmed for five days, and at another time they sloughed through mountainous waves with a 70-mile gale battering the Lang Syne.

It was 47 days after they passed Diamond Head that the Lang Syne anchored at the isthmus at Catalina Island. She'd covered 3,600 miles.

Now Bill and his wife are considering future ventures on their Lang Syne, and are finding it hard to get back to an everyday, humdrum existence.

High-Capacity Valve Added By Fedders

BUFFALO—A new model HCP-38 high-capacity constant-pressure valve has recently been added to the line of valves manufactured by Fedders Mfg. Co. The valve is designed for use on large commercial refrigeration and air-conditioning installations.

Use of the valve, it is claimed, prevents the suction pressure in the coil or evaporator from falling below the desired point, and makes it possible to maintain proper temperature in different evaporators or coils when connected in multiple to the same compressor.

By controlling refrigerant pressure within close limits, the valve is said to prevent temperature of the room or cooler from dropping too low, as well as preventing coils and unit coolers from frosting over.

Standard equipment includes inlet and outlet connection flanges with tail pipes for sweating tubing ranging from 5/8 to 1 1/2 inch o.d. Capacity in wide open position is as follows:

Pressure Drop Lbs./Sq. In.	Capacity B.t.u./hr.
1.8	12,000
2.3	24,000
5.8	36,000
13.5	48,000
26.7	60,000

Complete specifications of the new valve are given in a new bulletin (389) just issued by the company.

Penn Moves Dave Coon To New St. Louis Branch

NEW YORK CITY—Appointment of Dave Coon, representative of Penn Electric Switch Co. in charge of the Philadelphia office, to Penn's new branch office in St. Louis has been announced by M. Parcaro, New York manager.

In St. Louis, Mr. Coon will be associated with Jules Beneke.

Mr. Parcaro also announced the transfer of Ed Corbett from Penn's Boston branch to the New York office, where he is sales engineer.

'Welder's Trouble Shooter' Issued By Westinghouse

EAST PITTSBURGH, Pa.—"The Welder's Trouble Shooter," an eight-page booklet listing the common troubles met by welders, together with the cause and cure for each, has just been issued by Westinghouse Electric & Mfg. Co.

Copies of the booklet, known as B.2150-A, may be secured from any Westinghouse district office.

There's an M.S.A INDUSTRIAL GAS MASK

DESIGNED
EXPRESSLY FOR YOUR
GASEOUS HAZARD!



M.S.A. Industrial Gas Masks provide complete protection against ammonia, methyl chloride and sulphur dioxide—using the smallest size canisters that pass U. S. Bureau of Mines requirements . . . the smallest size that insures safety in high emergency concentrations. • Investigate these considerations—they're more important than price. Check into wearing comfort and durability, too. You'll find—as the majority of mask users have—that an M.S.A. Industrial Gas Mask is your best buy. Let us prove it with an actual demonstration.

MINE SAFETY APPLIANCES COMPANY
Braddock, Thomas and Meade Streets, Pittsburgh, Pa.
District Representatives in Principal Cities

Foreign News

Frigidaire Units Take Leading Role In Mexican Food Conservation Exhibit

MEXICO CITY, Mexico — Five complete modern kitchens each equipped with a Frigidaire electric refrigerator in actual operation, a full-line display of 1938 Frigidaire units, and a bacteriological section featuring Zeiss microscopes and micro-projectors comprise the "Exposition for the Scientific Conservation of Foods" which was co-sponsored here by Frigidaire division of General Motors de Mexico and the local Nestle (Anglo-Swiss) milk products plant.

This exposition, first of its type in Mexico, was held in a specially selected building which was air conditioned for the purpose. The opening was presided over by leading health authorities, including Dr. Jose Siurob, governor of the federal district; Dr. L. Andreu Almazan, head of the federal department of health and public hygiene; Dr. Alfonso Priani, vice-governor of the federal district; and Dr. Salvador Zubiran, acting secretary of public welfare, under whom the country's public hospitals operate.

In the modern kitchens, recipes entered in a Nestle-sponsored dessert contest are tested. Best 63 recipes entered will receive awards, first prize being \$1,000 cash. This contest is being publicized and advertised throughout the nation, but in local advertisements an insert referring to the exposition is carried.

Each of the Frigidaire refrigerators displayed was in actual operation, and was accessible to the general public so that it could be examined and inspected as closely as desired. Frigidaire salesmen demonstrated the

principal features, and technical men helped to explain the scientific angles of food preservation by cold.

The bacteriological portion of the exhibit was arranged so that visitors might peer through the powerful microscopes or observe on a screen the images of living bacteria projected through the micro-projector. Bacteria used in these demonstrations are those most prevalent in foods of daily consumption. Dr. Alfonso Castrejon, noted Mexican bacteriologist who has a Harvard degree and six years of experience at the Institut Pasteur in Paris, was in charge of the hourly scientific displays and lectures.

Daily attendance at the show averaged 150 good prospects, it is said.

Backing the exposition was a four-month newspaper advertising campaign, with Frigidaire and Nestle separately subscribing their own space. In addition, Nestle sponsored two half-hour radio programs a week for a period of three months.

Two days before the exposition commenced, Frigidaire and Nestle officials cooperated in giving a special luncheon for leading newspaper editors and owners of radio stations at which the complete story of the project was told.

In his opening address, which was widely publicized, Gov. Siurob said, in part: "The City of Mexico feels very grateful to these two great private enterprises for having organized and executed what really is a valuable educational undertaking sorely needed in this country."

Market Is Favorable In Scandinavia, Says Haug

DETROIT—Reidar A. Haug, representative for Melchior, Armstrong, Dessau Co., Inc. in Norway, Sweden, and Finland, dropped into the News offices last Saturday for a visit, and painted a very favorable picture of the refrigeration field in Scandinavia.

Most of the refrigerating equipment such as valves, fittings, tubing, compressors, and the like used in Scandinavia is imported from the United States, said Mr. Haug, with the remainder being imported from Germany, Switzerland, England, or made right at home.

In Sweden particularly, the refrigerated display case has enjoyed a tremendous increase in production and sales, Mr. Haug declared.

There is no doubt in Mr. Haug's mind about the political future of Europe. War is inevitable, he believes. With armies engaged in extensive maneuvers, and national emotions aroused to fighting pitch, it is only a matter of time until the next Great War breaks out.

The Scandinavian countries managed to stay out of the last affair, and probably will keep out of the next one, Mr. Haug said.

Mr. Haug arrived in the United States on Sept. 10 for a four-weeks business tour of the companies whose products he sells in Scandinavia for the Melchior, Armstrong, Dessau firm. He will visit Detroit Lubricator Co., Alco Valve Co., Fedders Mfg. Co., Modern Equipment Corp., and other firms exporting products through Melchior.

He sails for his home office in Oslo, Norway, on Oct. 5. He intends to return to America next year for the New York World's Fair, in which a number of European companies plan to have exhibits.

Singapore Theater To Have Cooling

SINGAPORE, Straits Settlements—First installation of air-conditioning equipment in Malaya is being made in a theater in this city, according to a report of the American trade commissioner's office.

July Exports Increase Over June Figure

WASHINGTON, D. C. — Exports of household electric refrigerators, which registered a decided decrease during the month of June, returned to a more normal level during July, according to the electrical division of the Bureau of Foreign & Domestic Commerce.

Exports during July amounted to 12,442 units valued at \$936,113, as against 9,305 units valued at \$721,615 for the month of June, statistics show.

Hongkong Taking Position Once Held By Shanghai

PHILADELPHIA—As a result of the undeclared Sino-Japanese war, Hongkong is replacing Shanghai as the business center of China, and indications are that this British colony may become the new metropolis of the Far East, Walter D. Barker, Far Eastern sales manager for Philco Radio & Television Corp., stated on his annual visit to headquarters here recently.

Philco and many other American companies have moved their Chinese offices from war-torn Shanghai to protected Hongkong.

Another effect of the war, Mr. Barker said, has been to increase the market for American and European products in the conquered areas of China.

Much Japanese merchandise is being sent into these territories, Mr. Barker pointed out, but so many of these Japanese products are inferior in quality that the Chinese prefer American and European goods.

To illustrate his contention, Mr. Barker said that a Japanese five-tube radio receiver, copied from American models, is sold for as little as \$5, but within a short time the set is a total loss. The disappointed Chinese customer, by now accustomed to radio entertainment, is likely to buy an American or European radio, and incur a strong prejudice against other Japanese merchandise.

The Japanese are suffering economically much more than the Chinese, said Mr. Barker.

Aircon Corp. To Handle U.S. Line In Australia

SYDNEY, Australia—A company known as Aircon Corp. Pty. Ltd. has recently registered in Sydney with a capital of approximately \$400,000, and is said to have obtained sole distributing rights in Australia for an American manufacturer of refrigerating and air-conditioning equipment, the American trade commissioner's office here reports.

The new company will bring some engineers from United States to Australia. Equipment of two other American manufacturers is now being made in Australia under license.

Wegman To Represent Virginia Smelting Co.

AMSTERDAM, Netherlands—J. & W. Wegman, one of Amsterdam's oldest and best known chemical firms, has been appointed exclusive agent in the Netherlands for the "Extra Dry Esotoo" and "V-Meth-L" refrigerants manufactured by Virginia Smelting Co.

The Wegman firm, which also represents a number of other well known American companies, covers the country regularly with salesmen. Offices and warehouse of the company are located in the center of the city, on the Amstel river.

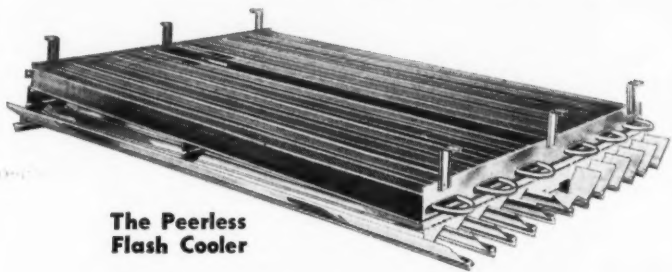
Waukesha Co. Gives Quarterly Dividend

WAUKESHA, Wis.—At a meeting of the board of directors of Waukesha Motor Co. Aug. 30, the regular quarterly dividend of 25 cents per share was declared, payable Oct. 1 to stockholders of record as of Sept. 15. The dividend is subject to deduction of 2½% applicable to the Wisconsin State Dividend Privilege Tax, which is paid direct to the state of Wisconsin.

Since July 31 closes the company's fiscal year, a quarterly statement was not released at the directors' meeting.

THE BUYER'S GUIDE

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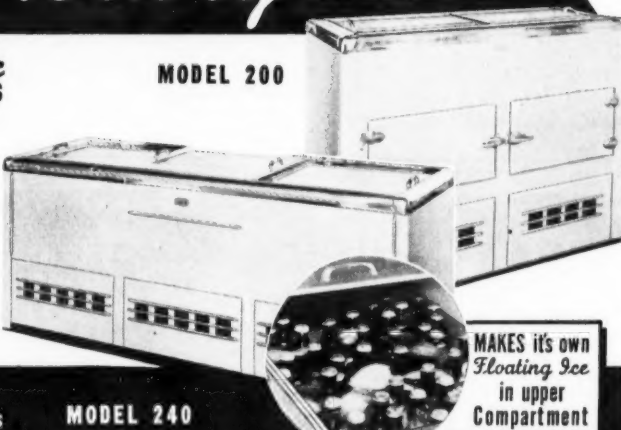
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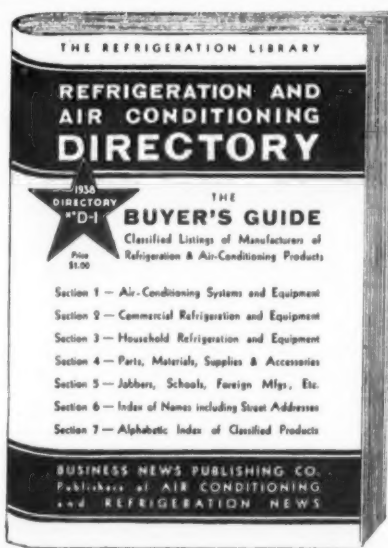


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Distributor-Dealer Doings

Milwaukee Salesmen Hit 'Industrial' Buying

MILWAUKEE—Action to limit the sale of all electrical household appliances, both major and minor items, to retail stores has been taken by the Milwaukee Retail Appliance Salesmen's Union.

In a notice given to distributors by its business agent, Herman Burbach, the union has declared itself against not only direct-to-consumer selling by distributors and manufacturers, but also against sales to employee groups in industrial plants, and to contractors without stores.

Only exception to the union program restricting the distribution of appliances to retailers is an arrangement covering "commercial business," defined as that going into apartments or other buildings where eight or more units are purchased.

Such direct sales would be limited to manufacturers or distributors located in Milwaukee itself, according to the union's plan. The union says it will find a way to prevent installation of such equipment purchased from any manufacturer not represented in Milwaukee.

Another element in the union's program would require each distributor to give all of his dealers equal opportunity to participate in any "specials" offered. Purpose of this is to meet protests of independent stores against situations which have occurred during the past year or two, in which large retail outlets were able to offer the public "specials" not made available to smaller retailers handling the same line.

Cragg Resigns Position With Cooper To Join Financing Concern

CHICAGO—Richard T. Cragg, since 1937 advertising and sales promotion manager of R. Cooper Jr., Chicago General Electric distributor, has resigned his position with that organization to become vice president and treasurer of the Landfield Finance Co., 1 N. LaSalle St., commercial and industrial equipment financing firm.

Mr. Cragg was graduated from Northwestern university in 1934, and joined the Cooper organization immediately after graduation. He was named advertising and sales promotion manager in 1937.

Coincident with Mr. Cragg's selection as vice president and treasurer, Landfield also announced an increase to \$1,000,000 in its stock capitalization. The firm is an outgrowth of one of Chicago's oldest finance companies.

J. M. Knox Killed In Automobile Accident

HARVEY, Ill.—J. M. Knox, zone manager for the stoker division of Whiting Corp. here, was fatally injured Sept. 8 in an automobile accident near Lexington, Neb.

Mr. Knox, who was associated with Kelvinator before joining Whiting's sales staff, was in charge of Whiting stoker sales in the northwest part of the country.

Boston Conference Opens Monday

BOSTON—Tenth Boston Conference on Distribution, sponsored by the retail trade board of Boston's chamber of commerce and cooperating organizations and featuring addresses by prominent authorities on various phases of distribution, will be held Sept. 26 and 27 at Hotel Statler here.

Special stress will be placed on international aspects of distribution, and, through active cooperation of the organizers of the Seventh International Management Congress, participation of leading European business executives in the program has been made possible.

The entire conference will be broadcast throughout the world by short wave over Station WIXAL by courtesy of the World Wide Broadcasting Foundation, which is sponsored and operated on a non-profit basis solely in the interests of education and international goodwill and which presents only non-commercial educational programs.

The conference is open to all, and the registration fee of \$10.50 includes all sessions, two luncheons, and a complete copy of conference proceedings. Registration fee for sessions except luncheon meetings is \$5; full conference reports may be obtained at \$3.75 per copy.

MANY SUBJECTS UP

The program for the conference follows:

Monday, Sept. 26, morning session: "Address of Welcome," P. A. O'Connell, general chairman of the conference and president of E. T. Slattery Co. and of Boston's retail trade board; "Productivity in Distribution," Dr. David R. Craig, president, American Retail Federation; "The Development of Marketing Boards in England," Harold Whitehead, Harold Whitehead & Staff, Ltd., business consultants, London, England.

"The Personality of a Retail Store," Mrs. Hortense W. Odum, president, Bonwit Teller, New York City; "Management in a Changing World," Harry Arthur Hopf, deputy president, International Committee of Scientific Management; "The Regulation of Retailing—In Retrospect and Prospect," Dr. Paul N. Nystrom, president, Limited Price Variety Stores Association.

Sept. 26, luncheon session—Eliot Wadsworth, president of Boston's chamber of commerce, chairman: "The Social Significance of Straight Line Distribution," R. W. Doe, vice president, Safeway Stores, Oakland, Calif.; "Some Aspects of Distribution in Great Britain Today," Viscount Leverhulme, governor, Lever Bros. and Unilever, Ltd., London, England.

Sept. 26, afternoon session—Edward R. Mitton, president, Jordan Marsh Co., Boston, chairman: "The Trend of Failures in the Distribution Field," Dr. Willard L. Thorpe, director of economic research, Dun & Bradstreet, Inc.; "The Rise of Forecasting and the Decline of Business Enterprise," Malcolm P. McNair, professor of marketing, Harvard graduate school of business administration.

LOOK INTO FUTURE

"Retail Organization of the Future," N. Balliol Scott, research and planning manager, Harrods, Ltd., London, England; "Consumer Education and Economic Efficiency," Dr. John M. Cassels, director, Institute for Consumer Education, Stephens college, Columbia, Mo.; "Changes and Developments in the Field of Distribution in Europe," Dr. H. Pasdermadjian, general secretary, International Association of Department Stores, Paris, France.

"Flat Freight Rates—Their Effect on the British Distribution System," Mrs. C. R. Taylor, editor, "Transport Management," London, England; "Costs of Retail Operation in European Countries," Dr. Julius Hirsch, Copenhagen, Denmark. Dr. H. M. Spitzer, director, Economic Psychological Research Institute, Vienna, Austria (Germany), will speak on a subject not yet announced.

Tuesday, Sept. 27, morning session—E. A. Duddy, professor of marketing, school of business, University of Chicago, chairman: "Current Activity in Domestic Trade," Dr. Edward L. Lloyd, chief, market

Business Seems To Be Okay In Florida



New home of Major Appliances, Inc., Miami distributor for Leonard and other appliance lines. The new "home" will be the scene of a gala birthday party and open house Oct. 17.

Major Appliances, Inc. Has New Quarters, Plans Big Party

MIAMI, Fla.—Major Appliances, Inc., appliance distributor with headquarters here, is moving its general offices from their present location at 839 W. Flagler St. to much larger quarters, combining offices with a salesroom and warehouse, at 925 W. Flagler St.

Opening of the new quarters will be celebrated Oct. 17 with a gala birthday party and open house. All of the firm's dealers are being invited to this affair, and each one will be sent a prize ticket for each purchase. Sometime during the open house festivities, a drawing will be held and prizes will be awarded to holders of the lucky tickets.

Major Appliances, Inc., which is now over two years old, distributes the following lines throughout the entire state of Florida: Leonard refrigerators, RCA-Victor records, Temco heaters, L & H gas ranges and L & H Kerogas heaters for both bottled and manufactured gas, Hot-stream automatic gas heaters for both bottled and manufactured gas, and Sepco electric heaters.

It also distributes Easy washers and ironers throughout the state, with the exception of a small Tampa territory, and in addition handles distribution of RCA instruments, sound equipment, and tubes in the southeastern section of the state.

The company still maintains an office and warehouse in Jacksonville and a warehouse in Tampa. George B. Gray is sales manager of the organization.

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THE BUYER'S GUIDE

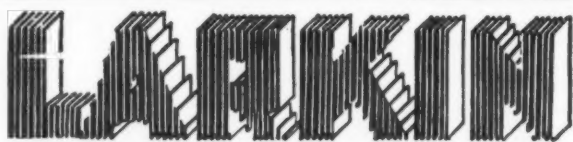
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Note these superior features... balanced refrigeration... temperature control... controlled high humidity... genuine porcelain finish... corkboard insulation... abundant storage space... magnetic display... no-sweat front glass... three-way service cabinet with scale stand, wrapping counter and paper roller, and unit housing.
The Percival Unitized Case is built to the high standard of all Percival equipment. Due to its popularity and volume production, it is offered at an extremely attractive price.
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Industrial Relations

McGrady Advocates Labor Bargains By An Entire Industry

NEW BRUNSWICK, N. J.—Edward F. McGrady, vice president of Radio Corp. of America and former U. S. Assistant Secretary of Labor, in addressing the recent annual industrial conference at Rutgers university here, advocated elimination of hours and wages as a factor in competition within industries through collective bargaining by an entire industry at one time rather than by individual companies at different times. About 750 representatives from industries throughout the state attended the conference, including delegations from RCA plants in Camden and Harrison.

"I am firmly convinced that when handling our labor relations in the mass production industries," Mr. McGrady said, "it would be more profitable... if the manufacturers within an industry would first agree to recognize the union and its representatives for collective bargaining. When it became time to bargain on wages, hours, and conditions of employment that it be done by the entire industry at one time rather than by individual companies at different times."

WAGES COULD VARY

"An industrial agreement of this kind would not necessarily mean that the same wages were to be paid in that industry regardless of where plants might be located. That question could be worked out in joint conference. If this system were adopted, it would take the pay envelope and the hours of labor completely out of competition within the industry."

Mr. McGrady charged American government and business with more open hostility and mistrust in labor relations than exists in any other country and voiced a plea for establishment of fair dealing and closer cooperation between government, industry, and labor. He urged, too, the protection of a strong national authority.

CITES UNION'S RIGHTS

"In trying to enforce the Wagner labor relations act," he said, "we all regret some of the inexcusable things that have happened. But in this country, the legal right of workers to join a union will never be rescinded—not as long as we have a democracy—and the right to bargain collectively will never be repealed."

Other speakers and discussion leaders included William R. Mullee, supervisor of the standards department of the American Hard Rubber Co.; D. McLaren Heider, manager, industrial relations, E. I. du Pont de Nemours & Co., plastics department; and Lawrence A. Appleby, Socony-Vacuum Oil Co.

A. W. Robertson Scores Idea That Industries Drop Older Men

COLUMBUS, Ohio—During times of depression, older employees are preferred and continued on the payroll by most well-managed companies, declared A. W. Robertson, chairman of the board, Westinghouse Electric & Mfg. Co., speaking here before the Veterans of Foreign Wars.

Mr. Robertson cited employment figures of his own company to show that it has a higher percentage of men over 45 than the average of persons of these ages in the general population. Westinghouse at present employs 12,410 persons over 45, or 31% of the total payroll, whereas the number of all persons over 45 in the entire population is about 23%.

"It is true," he said, "that a man of advanced years, out of work, does have a difficult time securing employment. He certainly has a kick coming—but so, for that matter, does anyone out of work, particularly the young married man of 30 who has responsibilities that match almost any 45-year-old man's."

OLDER MEN RETAINED

"We shouldn't lose sight of the fact that men of advanced years with jobs hold them when younger men lose theirs," Mr. Robertson continued. "In other words, during times of depression older employees are preferred and continued on the payroll. The average organization has a larger percentage of people over 45 than will be found in a cross-section of the population."

"It seems to me that we must conclude that the problem of unemployment is a serious one, both to young and old, the cases varying in intensity with the individual. Since I have acquired my gray hairs I haven't had to look for a job, so I don't know exactly how I would go about it. But it does seem to me that the persistence and willingness to take anything that comes along, which is usually a characteristic of the younger person, would likewise bring results with an older person."

WON'T SEEK NEW FIELDS

"The trouble is, we older people usually get the notion that we can do only one thing well and that is what we want to do. It often happens that the world is well supplied with people to do the same kind of work we like to do. Or perhaps our line of work has ceased to be needed at all. The older man out of a job must be willing to start all over again, and if he is willing he will most certainly find his opportunity."

Mr. Robertson, who is a member of the committee on the problem of the older worker recently appointed by the Secretary of Labor, reported that much valuable information is being obtained by the committee, and "it is hoped that worthwhile conclusions may be reached."

"One thing of which we may be certain," he said, "is that industry is not hostile to the older man."

INDUSTRY'S SHARE TOO BIG

The whole problem of unemployment is one that is usually laid at industry's door, and unfairly so, Mr. Robertson continued. Even in the best times, only about half the population is engaged in business and industry. Manufacturing actually engages in good times considerably less than 25% of the population, so it can hardly be responsible for all the country's unemployment.

"The manufacturer offers his goods for sale, and if they are not bought or used by the public he can give no work," he explained. "It is idle for demagogues to tell the manufacturer to employ men when there is no work. No business can run on any such basis."

"This doesn't change the fact, however, that men out of work are a problem which should cause everyone concern. And industry is concerned. Its employees are its first concern because it knows that it has no life or existence except through them."

Boiler Union Claims Code On Operators Is Being Evaded

(Concluded from Page 1, Column 2)

with at least two years of experience, for steam boilers and other closed vessels.

Commissioner Joseph P. Wolfe, speaking for the department of building and safety engineering, told the Council that "few people had obtained licenses who did not deserve them, and that they had been issued according to the best knowledge and experience of the department."

Mr. Wolfe also pointed out that in the case of certain types of refrigeration systems, which were under 25-tons capacity, using Class 1, (non-toxic) refrigerants, the requirement calling for the constant attendance of an engineer had been waived.

Elaborating on his petition, Mr. Passage told the Council that the Detroit building department did not have enough inspectors, and that violations of the ordinance covering the operation of boilers were common.

PORTER AS OPERATOR?

Citing several cases in point, Mr. Passage stated that the Royal Palms hotel permitted its boilers to be operated from 12 p.m. to 8 a.m. by the night porter.

In the case of the Marathon Linen Supply Co., a high-pressure boiler had been found to be without an attendant for one hour and 45 minutes, Mr. Passage related, which was a clear violation of the ordinance requiring that high-pressure boilers should not be without attendants more than 15 minutes at a time.

At the Central Overall Supply Co., the same men were used for maintenance of the building and operation of the high-pressure boilers, he said.

Mr. Passage charged that the Palmetto hotel permitted ice machine operators to fire the boilers, and required the same men to do maintenance work.

Fairbairn hotel firemen were forced to do repair work in the building, causing their absence from the boilers more than 15 minutes at a time, according to Mr. Passage.

PROBLEM OF INSPECTION

The Indian Village hotel, which is now in federal receivership, was charged with operating a completely automatic oil-burning system for the past two months without a licensed boiler engineer in the building. Mr. Passage related that his appeals to the federal receiver had been ignored.

Council President Edward W. Jefferies interrupted the speaker by pointing out that his charges related to the "enforcement of existing ordinances that the Council had already approved," and stated that the question was one to be handled by the department of safety engineering, and not the City Council.

Mr. Jefferies then asked Commissioner Wolfe how many boiler inspectors were employed by his department. Mr. Wolfe said eight.

Mr. Jefferies then asked Mr. Passage if he had any solution for the inspection problem.

Mr. Passage replied that "More licensed operators should be put back on the boilers. The Indian Village Apartments have their boilers operated by a gardener, and the Royal Palm hotel has no operator at night."

Councilman Jefferies then asked Commissioner Wolfe if he made a practice of prosecuting violators of the boiler code.

Mr. Wolfe explained that when a complaint came in it was investigated. The owner was then written a letter, and if he did not elect to comply with the ordinance he was taken to court. Mr. Wolfe said the boiler ordinance was enforced just like any other ordinance.

'OVER-INSPECTION'

"Don't you get more complaints of 'over-inspection' than 'under-inspection,' Mr. Wolfe?" asked Mr. Jefferies.

"Yes," Mr. Wolfe stated, "we do. The problem is much greater in that respect."

H. H. Mills of the department of

safety engineering, who is directly in charge of boiler inspection, then informed the Council that when his inspector had been at the Indian Village Apartments 10 days ago a licensed operator had been in charge.

Mr. Mills stated that where a plant was small enough, and was fully automatic, fired by an oil burner or stoker, he thought it "unreasonable to hire a man to sit and watch it run," and that in still other cases it might be unreasonable to "get tough" and say that the boiler operator could not leave the room at all.

"I don't know how we could handle this situation any better than we do," Mr. Mills stated. "We don't police these places. Our business is to investigate them and make reports. We make 6,000 inspections of boilers in Detroit each year—an average of once for each boiler in service."

At this point Councilman Jefferies remarked to Mr. Passage that "it

would be impossible to station an inspector in every boiler room in the city."

Mr. Jefferies inquired about any serious fires or accidents as a result of the alleged lack of enforcement of the ordinance.

Mr. Passage said there had been none, but that the oil burner had "blown up" in the Indian Village Apartments the day after it was installed.

Referring to the Boiler Operators Union and the building department, Mr. Jefferies then asked, "Why can't you fellows get together and work out something?"

Mr. Passage ignored this request by starting to mention further violations in laundries, but Mr. Jefferies interrupted to state, "That's all provided for in the ordinance, and is a matter of policy in the building department. I move that the entire matter be turned over to Mr. Wolfe and Mr. Mills of the building department and that the union work it out with them."

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Wheel fits palm of hand. Handle swivelled and securely locked to bonnet. Steel nut makes firm, sure seal between bonnet and body.

Special spring loaded packing holds gaseous whether valve is in open, closed or partially open position and prevents pulsations from reaching Sylphon.

60° seat assures a positive and easy seating action.

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FOR SALE—250 Universal twin cylinder compressors—sulphur or methyl (1936 models), removed from running installations. Need reconditioning. Priced for immediate sale—as is without flywheel—\$3.50. With flywheel—\$4.00. F. O. B. Springfield, Illinois. HUMMER MANUFACTURING COMPANY.

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Uses less than 1 kw. per hr. Plugs into house current. Price \$145.00 Fob Wabash, Ind. P. O. Box 304.

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DOMESTIC CONTROLS repaired: Ranco pencil \$1.75, Ranco box \$2.00, General Electric \$2.00, Tag \$2.00, Cutler-Hammer \$2.00, Penn \$2.00, Bishop Babcock \$2.50, Majestic \$2.50, Penn magnetic \$2.50, G. E. Frigidaire \$2.50. In business over 20 years. Our name is our guarantee. UNITED SPEEDOMETER REPAIR CO., INC., 436 West 57th Street, New York City.

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HAVE YOUR patent work done by a specialist. I have had more than 25 years' experience in refrigeration engineering. Prompt searches and reports. Reasonable fees. H. R. VAN DEVENTER (ASRE), Patent Attorney, 342 Madison Avenue, New York City.

QUESTIONS

Information on

The Gilfillan Co.

No. 3293 (Dealer, Kansas)—"Can you give me the address of Gilfillan Refrigeration Co. and any information about them?"

Answer: Address Gilfillan Bros., Inc. at 1215 Venice Blvd., Los Angeles, Calif.

A story about this company appeared in the May 4 issue of AIR CONDITIONING & REFRIGERATION NEWS. A copy of this issue is available at a cost of 20 cents.

Names of all manufacturers are listed in the new 1938 Refrigeration & Air Conditioning Directory. This is a 252-page book which sells for \$1.00 per copy.

The book is divided into seven general sections: Manufacturers of Air Conditioning Systems and Equipment; Manufacturers of Commercial Refrigeration and Equipment; Manufacturers of Household Refrigeration and Equipment; Manufacturers of Parts, Materials, Supplies, and Accessories; Jobbers, Schools, Foreign Manufacturers, etc.; Index of Names Including Street Addresses; and Alphabetical Index of Classified Products.

The arrangement, classification of products, and the selection of names in this directory has been made entirely from the viewpoint of the average buyer in the refrigeration and air-conditioning business. The book is an entirely new compilation from start to finish. The products are classified under natural groupings and there is a complete index of all classified products in the back of the book.

Coolerator FTC Case Order Reprinted

No. 3294 (Dealer, California)—"I am informed you have published the hearings of a cease and desist hearing held by the Federal Trade Commission in which the Coolerator Co. of Duluth, Minn. and the Ward Refrigerator Co. of Los Angeles as co-defendants were enjoined from a certain style of advertising."

Answer: Copies of the reprints of the Federal Trade Commission's "Findings as to the Facts" on this case are available at a cost of 25 cents each. In addition to this reprint, there are several issues of AIR CONDITIONING & REFRIGERATION NEWS which cover the testimony on the hearings of the Coolerator case by the Federal Trade Commission.

Refrigeration History In 1936 Issues

No. 3295 (Association Secretary, Ohio)—"I am very much interested in reading a complete history of the residential mechanical refrigerating industry and have been informed that this may be obtained through you."

What I would like to see is a history showing the original low pressure mechanical household refrigerating machine and then each improvement as it came upon the market with the dates.

If you have this information, kindly advise me what I must do to get the use of it just long enough to read it. If it is necessary to buy it, and it does not cost too much, I would be willing to do so. However, I will have no use for it after reading it, and can furnish any security desired to assure you that it will be returned in as good condition as received, if I can arrange to rent or borrow it.

"I manufactured artificial ice for 7½ years and sold the plant because I could see prohibition and the household refrigerator coming and I am just curious to read a complete history of the household mechanical refrigerator."

Answer: There is no one single book that gives the history of the household mechanical refrigeration industry. However in the fall of 1936, we published four special "historical" issues which constitute the best history of the industry now in existence.

These four issues (Sept. 9, 1936; Oct. 7, 1936; Nov. 4, 1936; and Dec. 2, 1936) are available at a cost of 25 cents each or \$1.00 for the whole set. You may have to piece the information together, but it is all there.

Not 'Burtee,' But 'Sperti' Lamp

No. 3296 (Distributor, New Hampshire)—"In your recent publication we were interested in your article on Sterilamps. A local meat market is interested in this equipment but was

mostly interested in this Dr. Burtee Lamp. We understand that Dr. Burtee is the original inventor.

"Can you give us any information about the Dr. Burtee lamp, and where it can be secured?"

Answer: We have never heard of a Dr. Burtee. There is a lamp on the market, however, called the "Sperti" lamp, the sale of which is being promoted by Dr. Sperti of Cincinnati.

We have little information concerning this lamp except that it has been on the market for some time for therapeutic applications.

For further information concerning the "Sterilamp," write directly to H. J. Hoffman, manager, Westinghouse Lamp Division, Westinghouse Electric & Mfg. Co., Bloomfield, N. J.

Recording Instruments For Household Units

No. 3297 (Parts Jobber, Missouri)—"One of our customers has requested that we furnish him with prices on a suitable recorder instrument to chart the running time and rest period of ordinary compressors in domestic boxes."

"As we are unable to locate from a directory the type of instrument we have in mind, we thought possibly you could help us by suggesting the name of a manufacturer to whom we might write regarding this kind of equipment."

Answer: The following are manufacturers of recording instruments for refrigeration unit operations:

Bristol Co., The, Waterbury, Conn.
Friez & Sons, J. P.
4 N. Central Ave., Baltimore, Md.
Marsh Corp., Jas. P.
2069 Southport Ave., Chicago, Ill.
Minneapolis-Honeywell Regulator Co.
2934 Fourth Ave., So., Minneapolis, Minn.
Practical Instrument Co.
2717 N. Ashland Ave., Chicago, Ill.
Tagliabue Mfg. Co.
Park & Nostrand Ave., Brooklyn, N. Y.
Taylor Instrument Co.
95 Ames St., Rochester, N. Y.

We believe that the Jas. P. Marsh Corp. has recently developed a recorder which may be particularly suited for your work.

Commercial Capacities Last Published In '36

No. 3298 (Distributor, New Jersey)—"We have been informed that about two years ago you published reprints of an article in AIR CONDITIONING & REFRIGERATION NEWS, concerning condensing unit capacities of various manufacturers."

"Will you send us a dozen copies of this reprint?"

Answer: We did publish this data in the May 6, 1936 issue of AIR CONDITIONING & REFRIGERATION NEWS.

We have not published any further figures along this line since that time for the reason that the Refrigeration Division of the National Electrical Manufacturers Association in 1937 decided against giving out this information, and this ruling has not been rescinded.

Issues In Which Nema Figures Appeared

No. 3299 (Manufacturer, Illinois)—"Will you please advise if the Nema reports which have been appearing in your publication are published semi-annually or if only the monthly reports are available."

"We are particularly interested in the sales under items Nos. 4 and 5. We have these figures for June and July and would appreciate your supplying the figures for the domestic quantity value for the first five months of this year."

Answer: The Nema reports for the first five months of the year were published in the following issues:

Figures for January, March 16, 1938 issue; Figures for February, March, and April, June 1, 1938 issue; Figures for May, July 6, 1938 issue.

These issues are available at a cost of 20 cents each.

A Local Fire Dept. Seeks Information

No. 3300 (Dealer, Massachusetts)—"We have a request from the local fire department for the following information: names of popular refrigerators; kind of refrigerant used in each; what to do in an emergency (fire), shutting off flow of gas, use of gas masks, etc."

"If you can assist us in supplying a chart containing this information we will certainly appreciate it."

Answer: We would advise the local fire authorities to do the following: (1) Obtain a copy of our 1938 Specifications Booklet which gives information about the various models

of refrigerators and the kind of refrigerant used in each.

(2) Obtain a copy of the Sept. 7, 1938 issue of AIR CONDITIONING & REFRIGERATION NEWS in which will be published the proposed code regulating the installation of refrigeration and air-conditioning systems.

(3) Write to John J. McElligott, chief fire commissioner in New York City, for instructions as to what sort of action they recommend in handling refrigeration systems that are involved in fires.

Moulds For Various Types of Confections

No. 3301 (Manufacturer, New York)—"Can you give us the names of manufacturers who are in a position to supply moulds and other equipment for the manufacture of chocolate coated ice cream confections and the like for sale overseas."

"It was our thought that while this process is pretty well controlled in the U.S.A., that it might be possible to buy the accessories needed to make up locally in overseas markets suitable installations for this business."

Answer: Contact the Dairy and Ice Cream Machinery and Supplies Association, Inc., 232 Madison Ave., New York City, of which C. Earl Breece is secretary, and the National Association of Counter Freezer Manufacturers, 35 East Wacker Drive, Chicago, Ill. These two associations will be glad to supply you with the desired information I am quite sure.

We also understand that the Associated Service, Inc., 358 Bell St., Akron, Ohio manufactures moulds for ice cream confections.

Locker Storage Data In Several Issues

No. 3302 (Dealer, New York)—"Will you kindly send us a few copies of your May 1938 issue in which reference and information can be found on food storage lockers. If there is any charge for same we will be glad to reimburse you."

Answer: The June 8, June 29, and July 27 issues of AIR CONDITIONING & REFRIGERATION NEWS all contain much valuable information on food storage locker systems.

Seeks Service and Specifications Data

No. 3303 (Parts Jobber, Colorado)—"We are interested in obtaining a manual on refrigerators, especially domestic showing manufacturers, specifications, gas charges, etc."

"If you do not have such a manual, will you be kind enough to refer this inquiry."

"We are of the opinion that there is a manual of this type, and believe the name is 'Bauder Manual' or something similar."

Answer: We do publish a series of manuals telling how to service electric refrigeration equipment.

The 1936 Refrigeration and Air Conditioning Specifications Book gives the essential data including the gas charges for all household and commercial refrigeration units manufactured through 1936.

We also publish one set of manuals which give specific service instructions for household electric refrigerators, and another set of manuals giving service instructions for commercial refrigeration systems.

We have never heard of the "Bauder Manual."

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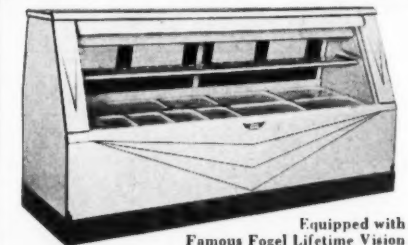


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Air Conditioning

No Startling Improvement Can Be Expected In an Employee's Health If He Spends Only One-Fourth of His Time In Conditioned Air

This article, the second written by Dr. Albert Young, director of the only completely air-conditioned hospital in the country, explains the probable reasons why more definite improvements in employee health have not been shown in studies made in offices which have been air conditioned.

It is interesting to note that the other leading article on this page, telling how an epidemic of colds and influenza was averted by employees of the Lincoln Liberty Life Insurance Co. in Lincoln, Neb., gives a much more enthusiastic picture of the benefits of air conditioning to employee health than those quoted in Dr. Young's article.

By Albert G. Young, Ph. D., M. D.

THERE has been some consternation among members of the air-conditioning industry concerning reports to the effect that large commercial air-conditioning installations have not decreased the incidence of illness among the employees.

The report of the Metropolitan Life Insurance Co. is one of those most widely circulated throughout the industry, since one report was published in Heating, Piping & Air Conditioning in June, 1934, and another in the January, 1938 issue of Refrigerating Engineering.

In the last mentioned report, McConnell, Fellows & Stephens said, "We may fairly conclude from a comparison of the two groups, one working (for 22.3% of the week) in an air-conditioned building and the other for the same period in a non-air-conditioned building but under reasonably comfortable conditions, that air conditioning has not shown any measurable effects on the incidence or duration of absences for upper respiratory infections or of non-respiratory illnesses."

"From the viewpoint of comfort, however, which is affected by temperature, humidity, and movement of the air, as well as by dust, odors, and distracting noises, air conditioning has, in the opinion of the authors, a positive value, and for this reason probably enhances efficiency."

A similar report appeared in the Journal of the American Medical Association by Dr. Leverett D. Bristol. He concluded that from his findings, "there is no evidence to indicate any improvement in incidence

or duration of sickness among a group of about 1,000 people working in scientifically controlled air-conditioned spaces as compared with a control group of approximately the same size working in non-air-conditioned quarters ventilated by the usual mechanical and natural methods."

In commenting upon these findings he said, "The somewhat negative results in this comparative study may be based not so much on the lack of influence of air conditioning on absence because of sickness as on the satisfactory quality of the ventilation in this particular instance available to the control, non-air-conditioned group."

To my mind these reports are as good as could be expected. If one considers that employees spend but 22.3% of their week in an air-conditioned environment, there is no reason to expect that it will protect them from infection the other 77.7% of their time. Increased comfort with consequent increase in efficiency is the best result one could expect unless the employees went home to an air-conditioned house or apartment.

HOW TO GET RESULTS

We could then expect that they would be in an air-conditioned environment about two-thirds of the time and should show some improvement in their general health. For this reason we can only say that air conditioning provides a more healthful condition for the period during which the employee is at work.

However, this is a step in the right direction since it is only logical to conclude that with the development of the industry it is only a matter of time until air conditioning will be a standard requirement for living quarters of all kinds as well as stores and recreation buildings. As this program increases definite benefits to health may be predicted.

COMMENTS TO A.M.A.

In a letter to the Journal of the American Medical Association (Aug. 27, 1938 issue, page 863), I commented on the articles just mentioned and in conclusion said:

"These reports are undoubtedly of value, but they should not be used as an argument against the healthful effects of air conditioning. In other words, I believe that the workmen are placed at a real advantage when they are subjected to an air-conditioned environment, but this cannot be expected to carry them through the remaining 16 hours of the day any more than we could expect a dose of insulin given in the morning to take care of the carbohydrates that a diabetic patient eats for his evening meal."

Air-Maze Corp. Moves To Larger Quarters

CLEVELAND — Air-Maze Corp., manufacturer of industrial, automotive, and air-conditioning filters, has moved to a new location at 5200 Harvard Ave. here.

The larger offices and manufacturing space will make it possible to give quick and efficient service.

Tenants In Air-Conditioned Building Escape Ravages of Annual Influenza Epidemic

LINCOLN, Neb.—How an epidemic of colds and influenza was averted by employees of the Lincoln Liberty Life Insurance Co., while their offices were protected from the ravages of dust storms and insects by an air-conditioning system, is told by H. L. Schwenker, vice president of the company.

Reporting his first year's experience with the system in a recent issue of Real Estate Record, Mr. Schwenker says that "in the fall of 1936 the Lincoln Liberty Life Insurance Co. completed the remodeling of the outmoded but structurally sound Little building in the heart of Lincoln's business district, renamed it the Lincoln Liberty Life building, and opened it to tenants as a modern air-conditioned office structure."

"The property was purchased for the ground value, and it was possible to use the walls and foundations at a great saving. The interior of the building was completely rebuilt, with new floors, partitions, elevators, and fixtures. A sixth floor was added, and the old walls were cleaned with live steam."

DESIGNED FOR TENANTS

"Of the 22,000 sq. ft. of space above the ground floor, the owners occupy about 9,000. The rest is rented at approximately \$1.50 per square foot. Because most of this space was leased either prior to or during the modernization, it was possible to arrange it to fit the tenants' needs. This added to immediate cost, but eliminated necessity of changes when the tenants moved in, which reduced the over-all expense."

"The total cost of modernization was about \$180,000, of which the installation of air-conditioning equipment accounted for \$28,000. The entire plumbing, heating, and air-conditioning outfit was a little over \$50,000. The ground floor, occupied by retail stores, is not air conditioned, but in summer two stores adjoining the lobby are kept almost as cool as the floors above by conditioned air entering the lobby from the upper part of the building."

ILLNESS REDUCED

"After nearly 18 months' experience as owner-occupants of an air-conditioned building, it is our belief that one of the major benefits of air conditioning is given too little attention."

"That is the effect on the health of occupants. To illustrate: during the winter of 1936 and early 1937, Lincoln suffered an unusual epidemic of colds and influenza. In previous years, with moderate sickness records, absences among our employees amounted to as much as 10 to 15%. Last year, despite the epidemic, time lost through illness was negligible. This might be coincidence, but we believe that air conditioning deserves most of the credit."

DUST KEPT OUT

"Another great benefit in this part of the country, where the air sometimes is laden with dust, comes from air conditioning's cleaning function. This means comfort for the tenant and protection for his office equipment. The advantage to the landlord lies in lower maintenance costs."

"This is not meant to minimize the contribution to summer comfort made by air conditioning, but we can honestly say that, if it were necessary to choose between eight or 10 weeks of summer comfort and air conditioning during the rest of the year, we would do without the summer comfort."

EQUALIZES VALUES

"We have found that air conditioning tends to equalize the value of space throughout a building. As a rule, tenants prefer the higher floors frequently because they are cooler or quieter in summer. Also, freedom from flies is obtained at about the seventh floor."

"There are no problems of temperature and annoyance from insects in an air-conditioned building, and noise from the street is reduced greatly because the building is tightly closed the year around."

"From the owner's standpoint, air conditioning has still another advantage. It permits more careful selection of tenants. It has been our

experience that only prospects of the better class apply for space, and we have had little difficulty in filling our building with desirable tenants. As a matter of fact, we have a waiting list."

"We strongly commend to other building owners the course which we followed in buying air conditioning. We believe that our best investment was the money spent for the services of a good consulting engineer, who wrote the specifications for our equipment."

REFRIGERATING UNITS

"The system installed consists of three 25-hp. Westinghouse six-cylinder compressor units which develop, with a chilled water circulating system, about 20 tons of refrigeration each. On each of the upper floors of the building is an American Blower floor-type air-conditioning unit with a capacity of 5,000 to 6,000 c.f.m. of air, and with a refrigeration capacity of from 12 to 15 tons."

"These units clean the air, cool or heat it, and dehumidify or humidify it, depending on the season. The units then force the air through a system of sheet metal ducts and grilles designed to give adequate circulation and distribution without drafts."

AIR DISTRIBUTION

"The unit on each floor receives a controlled amount of fresh air which has been pre-cooled and cleaned by an attic unit. This is mixed inside the unit with recirculated air which has been filtered at the unit. A part of this mixture is then drawn up through the cooling coils in summer and the heating coils in winter."

"The remaining air is automatically by-passed around the cooling coil to supply a proper balance between the sensible and latent heat which must be absorbed by the air when it is introduced into the conditioned space. It then is mixed with air which has passed through the coils and is drawn into the series of blowers at the top of the unit which force the air through ducts. In winter all of the air normally goes through the heating coils, none of it being by-passed."

"In the pent-house is a supply fan with a capacity of approximately 10,000 c.f.m. All fresh air is brought in by this fan. In summer this air passes through a pre-cooling coil, and in winter through a heating coil."

"Air is cleaned by an American automatic air filter. During the heat-

ing season it is humidified after it leaves the heating coil by a steam humidifier placed in the air passage. The humidifier is controlled by a humidistat."

COOLING WATER

"In the basement, adjacent to the compressors, is a large water cooler with direct expansion coils through which Freon gas from the compressors is circulated, chilling the water surrounding the coils to a temperature of about 45° F. A centrifugal pump circulates the water from this tank through the dehumidifying coils in each of the conditioning units on the upper floors."

"Water is returned to the cooler at a temperature of about 55° F. The Freon compressors are fully automatic, being turned on and off by thermostats in the chilled water tank. They are so controlled that they alternate in operation."

"An unusual feature of the installation is that city water, which has a temperature of approximately 60° F., is used for condenser purposes. This water is first taken to the attic of the building, where it passes through the pre-cooling coils before going to the condensers in the basement. About 10° is added to the temperature of the water in its passage through the pre-cooling coils, and the condensers add another 30°, so that it is discharged into the sewer at approximately 100°."

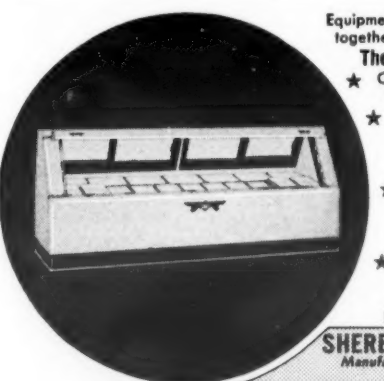
"Fresh air passing through the pre-cooling coils is reduced in temperature about 20°, all of the sensible heat being removed. It is estimated that this saves approximately 20 tons of refrigeration, reducing the size of the compressor plant."

"Conditioning unit on any floor can be shut down without affecting the conditioning of the other floors. An exhaust fan in the lobby draws air down from the floor above, and discharges it into the lobby and main entrance of the building."

SATISFACTORY OPERATION

"The installation has operated very satisfactorily, maintaining a temperature of 80° F. and relative humidity of 50%, with an outside temperature of 100° F. The Powers system of temperature control is used throughout the building for the heating system, and also for control of the air-conditioning system during the summer. Each floor also has a zone control for the east and west portions of the building."

"Architects for the modernization were Meginnis & Schaumburg, of Lincoln. Walter E. Gillham, consulting engineer, of Kansas City, Mo., was in charge of air conditioning and other mechanical work. The plant was installed by Wentz Co., Inc. of Lincoln."



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